

**KyPSC Staff Second Set Data Requests
Duke Energy Kentucky
Case No. 2007-00477
Date Received: January 3, 2008
Response Due Date: January 14, 2008**

KyPSC-DR-02-045

REQUEST:

Please provide any existing forecasts of the costs of developing and deploying the following in any of Duke's service territories across the Eastern Interconnect:

New conventional generation, for all types of fuels

New renewable generation, for all types

New DSM / energy efficiency programs, for all types, preferably organized by customer class

To the extent possible, disaggregate cost estimates into sub-categories such as, capital costs; fixed and variable operations and maintenance costs; fuel costs; etc. Provide expectations of cost of capital or discount rates assumed for new projects.

If forecasts are not available, please provide the information identified above for actual projects that have recently been developed by Duke and/or its affiliated companies within the US.

RESPONSE:

The costs of deploying new conventional generation and new renewable generation that will be utilized in the 2008 Duke Energy Kentucky IRP analyses are not available yet. However, the publicly available capital cost estimate for the 800 MW Cliffside Unit 6 pulverized coal unit approved in North Carolina is current estimate is \$1.8 billion in capital, and \$600 million in AFUDC, with total costs to customers anticipated to be reduced by approximately \$65 million in federal tax credits. However, this estimate is subject to change pending timing of receipt of the final air permit and additional negotiations with suppliers. The publicly available capital cost estimate for the 630 MW Edwardsport IGCC unit approved in Indiana is \$1.985 billion.

Regarding DSM and energy efficiency, information on new programs can be found in response to DR 02-047.

WITNESS RESPONSIBLE: Diane L. Jenner / Richard G. Stevie

KyPSC Staff Second Set Data Requests
Duke Energy Kentucky
Case No. 2007-00477
Date Received: January 3, 2008
Response Due Date: January 14, 2008

KyPSC-DR-02-046

REQUEST:

Please provide a description of any plans to modify existing coal and/or gas facilities to improve plant efficiency; to utilize renewable technologies. Please address the costs and benefits associated with these projects.

RESPONSE:

Current plant efficiency plans are geared towards maintaining current levels with slight improvements in heat rate, there are no immediate plans for significant efficiency improvements.

At this time we have not considered plans to utilize renewables at Kentucky power plants. Duke Energy has experience in co-firing wood at pulverized coal power plants, biodiesel in peaking power plants. This experience would be transferable to Duke Energy's Kentucky power plants.

Cost benefit analysis along with other financial analysis are completed when planning and implementing system enhancements and renewable fuel consumption tests for power plant operations.

WITNESS RESPONSIBLE: Stephen P. Sandfoss / James M. Lefeld

**KyPSC Staff Second Set Data Requests
Duke Energy Kentucky
Case No. 2007-00477
Date Received: January 3, 2008
Response Due Date: January 14, 2008**

KyPSC-DR-02-047

REQUEST:

If not already provided in previous discovery responses, please provide details of DSM/EE programs implemented in other jurisdictions that Duke plans to implement in Kentucky (please provide details on technology, timeframe, expected outcomes and participation levels)

RESPONSE:

See the attached files, which contain information on programs that have been proposed in South Carolina and Indiana through the testimony of Mr. Theodore Schultz. There are also files that contain information on programs recently offered in Ohio.

WITNESS RESPONSIBLE: Richard G. Stevie / Theodore E. Schultz

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application)
for Recovery of Costs, Lost Margin,)
and Performance Incentive)
Associated with the Implementation of) Case No. 06-91-EL-UNC
Electric Residential Demand Side)
Management Programs by The Cincinnati)
Gas & Electric Company)
)

In the Matter of the Application)
for Recovery of Costs, Lost Margin,)
and Performance Incentive)
Associated with the Implementation of) Case No. 06-92-EL-UNC
Electric Non-Residential Demand Side)
Management Programs by The Cincinnati)
Gas & Electric Company)
)

In the Matter of the Application)
for Recovery of Costs, Lost Margin,)
and Performance Incentive)
Associated with the Implementation of) Case No. 06-93-GA-UNC
Natural Gas Demand Side)
Management Programs by The Cincinnati)
Gas & Electric Company)
)

**DUKE ENERGY OHIO'S FIRST AMENDED APPLICATION TO ESTABLISH
DEMAND SIDE MANAGEMENT PROGRAMS FOR RESIDENTIAL AND NON-
RESIDENTIAL CONSUMERS**

Now comes Duke Energy Ohio, formerly The Cincinnati Gas & Electric Company, with the consensus of the Duke Energy Community Partnership (DECP), formerly the Cinergy/Community Energy Partnership (CCEP), the Ohio Consumers' Counsel (OCC), the Cincinnati Public Schools (Schools), and in consultation with the Public Utilities Commission of Ohio (Commission) Staff (Staff) to file this amended application (Amended Application) to implement a set of demand side management (DSM) programs

through 2010 for residential and small/medium size business consumers and to propose implementation of DSM Cost Recovery Riders applicable to residential electric and gas sales as well as for non-residential electric sales. Duke Energy Ohio, with the consensus of the DECP, OCC, and Schools, (together the interested stakeholders) applies for recovery of costs, lost margins, and shared savings associated with the proposed set of residential and non-residential DSM programs.

On or about January 24, 2006, Duke Energy Ohio¹, filed its Application to Establish Demand Side Management Programs for Residential and Non Residential Consumers (Application). Since that time, Duke Energy Ohio has, with the consensus of the interested stakeholders, reevaluated its proposed DSM programs and proposes to implement these programs as described in this Amended Application.

The Applicant is Duke Energy Ohio of 139 East Fourth St., Cincinnati, Ohio 45202. The DECP Collaborative members are: Myra Boggs with Working in Neighborhoods, Nina Creech with People Working Cooperatively, Christine Ritchie with Home Ownership Center of Greater Cincinnati, Gary Tabor with Adams/Brown Counties Economic Opportunities, Inc., Dave Scharfenberger with Communities United for Action, Jim Tenhundfeld with Cincinnati/Hamilton County Community Action Agency, Tonya Goins with the Public Utilities Commission of Ohio, Wilson Gonzalez with the Office of the Consumers' Counsel, Michael Gilkerson with Cincinnati Public Schools and Tim Lenahan with the Ohio Department of Development.

This application is divided into seven sections with seven appendices. Section I

¹ At the time of the initial filing Duke Energy Ohio was still operating as The Cincinnati Gas & Electric Company (CG&E). Coincident with the consummation of the merger between Cinergy Corp. and Duke energy Corporation, CG&E received approval from this Commission to change its name to Duke Energy Ohio.

provides background information, definitions, and acronyms. Section II contains the process used to select programs and measures. Section III discusses the cost-effectiveness methodology. Section IV provides descriptions of each program as well as the cost-effectiveness results. Section V contains the plan for program evaluation. Section VI discusses the recovery mechanism. And, Section VII details the calculation of the DSM riders.

The first two appendices (A and B) provide detailed information on the calculations of costs, lost margins, and shared savings for the residential and non-residential programs. Appendices C and D contain detailed descriptions of the operation of the DSM Riders. Appendix E provides the calculation of the DSM Riders. The last two appendices (F and G) contain the DSM Riders.

I. INTRODUCTION

A. Background

Duke Energy Ohio with the support and involvement of the DECP, has been active in the implementation of energy efficiency programs for many years. In 1992 the Commission ordered Duke Energy Ohio in Case No. 91-410-EL-AIR to form a Collaborative to provide energy efficiency programs to help reduce the electrical demand of consumers. Later that year, Duke Energy Ohio formed its first Energy Collaborative made up of members of the community, companies, community groups, and community service agencies that deal with energy issues. This effort was directed at all consumers from residential to large industrial consumers. Many quality programs were developed and implemented during the period of 1992 through 1996 that helped consumers save energy.

On December 19, 1996, the PUCO issued its order in Case No. 95-103-EL-FOR that recognized that the fundamental assumption that validates Demand Side Management (DSM), namely the inherent cost sharing linkage among all consumers of a utility, is broken in an open access, consumer choice environment. The key provisions of the order directed the Ohio Collaborative (re-formed as the Cinergy/Community Energy Partnership) to "...focus on (residential) programs, such as weatherization, which benefit low-income consumers and reduce Percentage of Income Payment Program (PIPP) costs, thereby benefiting all consumers..." In January of 1997, the Cinergy Energy Collaborative dissolved and formed the Cinergy Community Energy Partnership, now known as the Duke Energy Community Partnership (DECP) and narrowed its focus and programs to better reflect the directive from the Commission. The DECP established a charter as follows:

"The purpose of the Cinergy/Community Energy Partnership is to give Cinergy/ Duke Energy Ohio CG&E guidance and make recommendations on cost-effective programs that will benefit all residential consumers, especially low income, and help the community become more energy efficient."

The DECP Board is comprised of up to ten directors. The Chair is a representative from Duke Energy. The other members are a composite of individuals from community service organizations that focus on energy issues, other community service agencies, and individuals representing consumers as a whole. In addition to the board members, there are three ex-officio members. These individuals are from the Staff, the Ohio Department of Development Energy Bureau, and the OCC. Duke Energy staff and consultants support the DECP Board activities and planning while Duke Energy staff and Duke Energy sub-contractors implement the programs.

In Case No. 03-93-EL-ATA, Duke Energy Ohio recommended that DSM programs once again be implemented in its service area. As mentioned above, in the late 1990's, it became apparent to many that DSM programs in an Integrated Resource Planning (IRP) process were no longer reasonable. The driving principle to this conclusion was the realization that the utility, could no longer be assured that the costs of the incentives provided to consumers would be re-captured through the benefits of deferrals in the construction of new generation since, in a restructured environment, the utility could no longer be assured it would be providing generation service to the consumer. Thus, incentives paid to install more energy efficient equipment might never reap the benefits for the entity paying the incentives. In an IRP structure, incentive-based DSM made no sense.

Duke Energy Ohio has come to recognize that a new approach can be employed which justifies the implementation of DSM programs by the utility, from a societal point of view. In the past, a critical component to DSM program cost-effectiveness was the utility's avoided costs. Now, under deregulation, a forecast of market prices can be used as an alternative to, or proxy for, utility avoided costs. Any DSM program can be considered cost-effective if the cost of implementation can be offset by savings relative to forward projected market prices.

With this filing Duke Energy Ohio is proposing to offer energy efficiency measures within DSM programs to all consumers, regardless of their generation supplier, through the year 2010. Duke Energy Ohio, with the support of the Interested Stakeholders, is requesting approval to implement the proposed set of programs through 2010. Improving overall energy efficiency in the economy is extremely important from

an environmental as well as global competition perspective. Larger users of energy already have a significant incentive to improve their energy efficiency. These are the most likely consumers to have in-house engineering expertise and the financial capability to make efficiency improvements.

According to discussions with the National Association of Energy Services Companies, larger users are targeted by energy service companies offering new sophisticated methods to improve energy efficiency. Duke Energy Ohio does not intend to develop and offer DSM programs for large energy users since the needs of those users can be effectively met in the market place. Instead, it is the remaining market of residential and small/medium size business users for which Duke Energy Ohio sees the need to offer DSM programs. Those users tend to be overlooked by energy service companies because the level of individual savings is small. However, collectively, the savings can be significant, making this an important effort. These smaller consumers also have the most market barriers hindering action including lack of information, expertise, training, and capital. Duke Energy Ohio, working with the Interested Stakeholders, has developed a wide-ranging set of DSM programs to address these market barriers for all consumers in its targeted consumer classes. With this application, Duke Energy Ohio is seeking funding of the programs through two trackers. The tracker charge will apply to only those consumer classes receiving benefits, regardless of their electric supplier.

In the Commission's Order in Case No. 03-93-EL-ATA, a DSM Rider for residential electric DSM programs was approved with a zero charge. With this application, Duke Energy Ohio, with the support of the Interested Stakeholders, is proposing specific charges for residential electric consumers, the establishment of a non-residential electric

component for the approved DSM Rider, and. the establishment of a Gas DSM Rider and program for residential gas consumers.

B. Definitions

For the purposes of this Application, the following terms have been defined:

- 1) **“DSM Revenue Requirements”** shall mean the revenue requirements associated with all Program Costs, Administrative Costs, Lost Revenues (less fuel savings), and the Shared Savings Incentive.
- 2) **“Collaborative”** shall mean the DECP Collaborative.
- 3) **“Program Costs”** shall mean the costs incurred for planning, developing, implementing, monitoring and evaluating the DSM programs that have been approved by the Collaborative.
- 4) **“Administrative Costs”** shall mean the costs incurred by or on behalf of the collaborative process and that are approved by the Collaborative, including, but not limited to, incremental costs for consultants, employees and administrative expenses.
- 5) **“Lost Revenues”** shall mean the amount of net revenue due to lost sales due to installed DSM programs. Lost revenues will be calculated using estimates approved by the Commission which may include engineering estimates² of the level of decreased sales for each program. The level of net revenue due to lost sales will be the product of the actual level or the level calculated by multiplying the average lost sales per unit of DSM by the number of installed units, multiplied by the incremental charge, less the fuel costs reflected in the

² Engineering estimates, estimates based on generally accepted engineering calculations, will be used when there are no data on savings available from impact studies.

applicable market price or rate. Following any retail rate case, lost revenue recovery would cease on any lost revenues subsequently reflected in rates.

- 6) **“Shareholder Incentive”** shall mean a percentage share of the net benefits attributable to DSM programs provided as an incentive to pursue such programs. The Shareholder Incentive or Shared Savings will be a percentage of the net resource savings generated by DSM measure installation during each twelve-month period. The percentage will be based upon the level of load savings achieved relative to the goal for the program at or below the projected level of spending for that level of load savings. Net resource savings is defined as program benefits less utility program costs. Benefits will be calculated on the basis of the present value of avoided costs over the expected life of the implemented DSM programs.
- 7) **“DSM Cost Recovery Mechanism”** shall mean the methodology used to reconcile differences between the amounts of revenue actually collected through the mechanism and the amount of revenues estimated to be collected. For program and administrative costs, a balance adjustment amount will be determined by calculating the amount collected and the actual costs during the same twelve-month period. For revenues attributable to lost sales, the balance adjustment will be determined by calculating the revenues from lost sales based upon the difference between the actual installed units of the DSM measures and the projected units. If engineering estimates or estimates taken from studies outside the Duke Energy service area have been used as the basis for the calculation of Lost Revenues, during the first balancing period at which

sufficient actual impact data is available, an adjustment for the difference between the original estimate and the actual impact data shall be made retroactive to the program start date, and shall be included in the balancing adjustment for the following year. After impact data from the first impact evaluation study has been employed in a reconciliation, differences between actual impact data collected in a given year and the actual impact data used in a prior year shall be used only to affect future cost recovery, and shall not be applied retroactively to the program start date. For the Shareholder Incentive, the balance adjustment amount will be calculated by determining the incentive amount based on actual installed DSM measures and the projected incentive amount. Adjustments to the cost-effectiveness calculations arising from completion of the first impact studies will be applied retroactively to the program start date. The results of future impact studies will be applied up to the timing of the prior impact study.

All of these adjustments will reflect any differences between actual and projected sales volumes. Any over- or under-recovery, with interest applied at the rate equal to the average of the three-month commercial paper rate for the immediately preceding twelve-month period, will be divided by kWh or MCF sales for a subsequent twelve-month period, as a portion of the DSM balance adjustment to the DSM Cost Recovery Mechanism. Any over- or under-recovery of a previous balance adjustment amount will also be included in the application of the DSM balance adjustment. The recovery of the shared savings is only in the years the programs are budgeted for (and measures are installed),

and is not cumulative.

- 8) **“Voucher”** shall mean the credit receipt the consumer receives from a social service agency. The voucher can be used by the consumer as a partial payment toward the utility bill.

C. Acronyms

ACCA	Air Conditioning Contractors of America
AFUE	Annual Fuel Utilization Efficiency
ARI	Air Conditioning and Refrigeration Institute
CCEP	Cinergy Community Energy Partnership
CG&E	The Cincinnati Gas & Electric Company
DECP	The Duke Energy Community Energy Partnership
DSM	Demand Side Management
ECM	Electronically Commutated Motors
HEHC	Home Energy House Call
HVAC	Heating, Ventilation, and Air Conditioning
IRP	Integrated Resource Plan
NATE	North American Technician Excellence
NEED	National Energy Education Development
PER	Personalized Energy Report Pilot
PIPP	Percentage of Income Payment Program
PV	Photovoltaic
RSES	Refrigeration Service Engineers Society
SEER	Seasonal Energy Efficiency Ratio

II. PROCESS OF PROGRAM SELECTION

The DSM programs being submitted for approval to the Commission were developed by Duke Energy Ohio with the Interested Stakeholders through a two step process. The first step was development of proposed programs by Duke Energy Ohio. Similar programs are currently implemented in Duke Energy's Indiana and Kentucky service territories. If implemented in Ohio, these programs benefit from the shared administration, experience and development already invested by Duke Energy, thus keeping costs down for all consumers. The Interested Stakeholders have reviewed and approved these programs.

The second step was the solicitation of new program ideas from the members of the DECP Board. These ideas were then refined and reviewed by Duke Energy staff, applying the cost effectiveness analysis (described in section III) used for all programs. Those programs deemed cost effective were then reviewed by the DECP Board and considered for inclusion in the overall DSM process. Approved programs included within this filing are:

RESIDENTIAL PROGRAMS

- Home Energy House Call
- AC Check Pilot
- Smart Saver/Summer Saver
- Power Manager
- Energy Star Products
- Energy Efficiency Website
- Ohio Energy Project
- Appliance Turn-In
- Personalized Energy Report
- Pre-Paid Billing Services

COMMERCIAL PROGRAMS

- Commercial & Industrial (C&I) Prescriptive Incentive Program
 - School Incentive Program
- Photovoltaic Schools Demonstration/Education Program

RESEARCH

- House Call Plus Research Program

III. COST-EFFECTIVENESS SCREENING METHODOLOGY

A. General

Duke Energy Ohio believes it is in the best interest of its consumers to provide incentives that promote the installation and implementation of energy efficiency measures and technologies in a cost effective manner. Over time, new technologies are

designed that warrant attention within the context of utility provided DSM programs.

In addition to the economic and technological reasons for offering DSM programs in Duke Energy Ohio's territory, there are also market reasons for expanded utility involvement. First, as mentioned previously, only the largest companies are being served by the Energy Services market providers. Second, for residential and smaller commercial/industrial consumers, the energy efficiency market has many existing barriers to the adoption of efficient technology. These vary by technology and market but include: higher incremental costs for high efficiency equipment, lack of consumer education, lack of contractor/trade ally training, lack of equipment supply at time of replacement, fear of change, and societal costs not being reflected in prices. While it was hoped that during the general advance of restructuring, more free-market players would move the market towards greater energy efficiency, this is only happening for the largest consumers. Consequently, Duke Energy Ohio believes that the utility needs to continue to play a role in promoting and encouraging energy efficiency. The utility has an existing relationship with the consumer and is viewed by most consumers as their main source of energy information. Contractors, retailers, trade allies, and other players in the market also interact with the utility and its consumers. As such, the utility is in a unique position to integrate consumer and trade ally needs for information, education, services, market stimulation, and financial assistance through technology incentives to help remove market barriers and speed the adoption of more efficient technologies.

Duke Energy Ohio recognizes that implementation of energy efficiency measures within DSM programs can reduce the long-run supply costs of power for consumers and looming carbon mitigation costs. As a result, the Company believes it is important to

continue the work of cost-effectively increasing consumers' energy efficiency.

In addition, the cost of energy is expected to increase due to the cost of additional capacity required to meet a growing consumer demand and due to the cost of environmental compliance associated with the reduction of sulfur dioxide (SO₂), nitrogen oxide (NO_x), and mercury (Hg) emissions. This argues for an even more aggressive DSM program that targets not just reductions in kW summer peak demand (peak reduction programs), but also reductions in kWhs throughout the year (conservation programs).

B. Methodology

Duke Energy Ohio carefully evaluates the cost-effectiveness of DSM measures when making decisions about inclusion in DSM programs. The net present value of the financial stream of costs vs. benefits is assessed, *i.e.*, the costs to implement the measures are valued against the savings or avoided costs. The resultant benefit/cost ratios, or tests, provide a summary of the measure's cost-effectiveness relative to the benefits of its projected load impacts.

The main criteria Duke Energy Ohio uses for screening DSM measures are the Utility Cost Test (UCT), the Total Resource Cost Test (TRC), and the Ratepayer Impact Test (RIM). A Participant Test is also reviewed to make sure the program makes sense for the individual consumer. The UCT compares utility benefits to utility costs and does not consider other benefits such as participant savings or societal impacts. This test compares the cost (to the utility) to implement the measures with the savings or avoided costs (to the utility) resulting from the change in magnitude and/or the pattern of electricity consumption caused by implementation of the program. Avoided costs are

considered in the evaluation of cost-effectiveness based on the projected market price of power including the projected cost of environmental compliance. With the expected increase in the cost of compliance for controlling SO₂, NO_x, and Hg emissions, the benefits of conservation have increased. The cost-effectiveness analyses also incorporate avoided transmission and distribution costs, load (line) losses, and avoided ancillary services.³

The TRC test compares the total benefits to the utility and to participants relative to the costs to the utility to implement the program and the costs to the participant. The benefits to the utility are the same as those computed under the UCT test. The RIM test, or non-participants test, indicates if market prices and rates increase or decrease over the long-run as a result of implementing the program.

In addition to the standard tests, Duke Energy Ohio conducted additional cost-effectiveness studies that incorporate a more complete analysis of the range of expected values across alternate load and weather impacts. The cost-effectiveness that could occur under these alternate weather and market price conditions provides a more robust view of the cost-effectiveness of a measure or program. Duke Energy Ohio performed simulation analyses of the value of the energy impacts using more than thirty years of historical weather data. Under extreme weather conditions (and hence extreme market price and avoided cost conditions), the expected value of test results can increase. Under these conditions, DSM programs yield more value (*i.e.*, option value), since the value of the energy saved is also increasing. While the probability of such events may be small, the value of such events can be significant. The option valuation method provides insights

³ Ancillary services include OATT Schedules 1, 2, 3, 5, 6, 8 and OATT Schedule 7 split between peak and off-peak months.

regarding the extent to which a particular DSM program provides a hedge against potential increases in market prices and/or market price volatility.

The costs associated with implementing new measures in DSM programs include incentives offered to consumers to encourage participation and vendor delivery and installation costs (if applicable). The costs to market the program (including direct mail and/or channel fees) and the expenses for program administration are not directly included in the calculation of the UCT due to the difficulty of allocating them to the individual measures. Rather, measures are considered cost-effective as long as the UCT is more than 30% above 1.0 in order to allow for the additional program costs.

Previously, Duke Energy Ohio used EPRI's DSManager program for assessing DSM program cost-effectiveness; however, Duke Energy Ohio now uses a more comprehensive and convenient Excel-based analysis to replace DSManager because: 1) EPRI no longer supports DSManager; 2) computing power has increased to the point where PCs can now handle complex DSM evaluations more easily; 3) spreadsheet analyses allow for a more transparent review of input assumptions and key sensitivities, which serves to enhance the overall quality of the evaluation and subsequent decisions; and 4) Duke Energy Ohio's current approach allows for the assessment of weather normal load impacts, option valuation, and the future possibility of valuing avoided locational commodity costs on the electrical system (*e.g.*, constrained interconnections, highly loaded feeders).

C. Program/Measure Screening

Duke Energy Ohio is proposing that the following DSM programs be implemented.

RESIDENTIAL PROGRAMS

- Home Energy House Call
- AC Check Pilot
- Smart Saver/Summer Saver
- Power Manager
- Energy Star Products
- Energy Efficiency Website
- Ohio Energy Project
- Appliance Turn-In
- Personalized Energy Report
- Pre-Paid Billing Services

COMMERCIAL / INDUSTRIAL PROGRAMS

- C&I Prescriptive Incentive Program
 - School Incentive Program
- Photovoltaic Schools Demonstration/Education Program

RESEARCH

- House Call Plus Research Program

Detailed descriptions and information on each program are provided in the following section. The test results for each new measure and program in this DSM filing are provided on page 1 of Attachment A for the residential programs and pages 1a and 1b in Attachment B for the commercial and industrial programs. These results utilize the projected market cost of power including the projected cost of environmental compliance. All the programs pass the UCT and TRC cost-effectiveness tests. Duke Energy Ohio also

evaluated a photovoltaic incentive program. This program provided for the installation of a demonstration photovoltaic system in a few schools. While this program is not cost effective, it is being recommended for implementation as a demonstration and educational project.

The following programs are the initial programs identified by the DECP Collaborative. As part of the ongoing DECP annual planning process, the DECP Collaborative will review and make recommendations for revisions and improvements to the existing 5 year program plan and adjust programs and technology funding levels based on the performance of the programs, market conditions, and consumer demand. The Company and the DECP Collaborative will seek approval from the PUCO for those adjustments requiring funding level changes outside authorized levels or the addition or elimination of programs. Commission approval will not be sought for adjustments to existing programs due to new technologies as long as the programs continue to pass cost effectiveness tests.

IV. Program Descriptions

RESIDENTIAL PROGRAMS:

1. Home Energy House Call

The Home Energy House Call program (HEHC) is an in-home energy analysis that helps consumers determine the most cost-effective steps they can take in their home to save energy. The analysis looks at potential efficiency improvements from insulation to equipment replacement. Data taken from the analysis is run through a computer model to make recommendations and disaggregate the energy bill into usage categories. The results are mailed to the participant. This program will be jointly implemented with the Duke Energy Indiana and Duke Energy Kentucky territory to reduce administrative costs and leverage promotion.

Target Market: Owner occupied single-family homes and condominiums throughout the Duke Energy Ohio territory.

Technology Categories: The HEHC analysis looks at shell measures, air sealing, lighting, heating and cooling equipment, and appliance use in the home.

Market Barriers: The HEHC analysis addresses the need for quality information on energy efficiency options within a home. Consumers can get information by measure from other sources, but no other source within the market provides a full analysis of all measures. This independent view adds credibility to the information and allows non-biased analysis.

Components of Delivery:

Incentives: The audit is free to the consumer. No incentives are provided for measures installed, however, participants get a free low cost measure kit at the time of the audit to begin their energy savings immediately. The kit includes 2 CFL bulbs, low flow showerhead, 2 aerators, motion sensor night light and outlet gaskets.

Education/Training: HEHC is an education program in participant's homes providing information on ways consumers can save and make improvements.

Marketing: The primary method of participant recruitment is through direct mail to Duke Energy Ohio consumers by zip code areas. Other information is provided through bill stuffers, and call center referrals.

Market Support: Consumers who wish to implement the recommendations from the HEHC analysis utilize the existing contractors and market providers within the area.

Delivery Organizations: The program is delivered through GoodCents Solutions, a national energy services provider, who was chosen through a competitive bid process.

Quality Control/Monitoring: Consumers are asked to complete a written survey about their HEHC analysis experience and the information provided. Duke Energy Ohio also does in-field review with the field auditors and phone interviews of a participant sample.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$850,000.

Expected Participation: 3250 homes in the first year

Savings per Participant: 998 kWh 0.31 kW

Cost Effectiveness: Cost effectiveness results are UCT 4.89; TRC 4.89; RIM 0.98

2. AC Check – Test Program

Air conditioners are a large user of electricity during Duke Energy Ohio's summer peak season and, as such, their use and operation can negatively impact the Duke Energy Ohio system if they are running improperly. To address this, Duke Energy Ohio is testing during the 2006 summer season, a central air conditioning tune up and recharge program to increase efficiency of units. Using the Check Me! program developed in California, Duke Energy Ohio will work with contractors to test the savings available from these maintenance improvements.

Target Market: Consumers who have central air conditioning in owner-occupied single-family or mobile homes.

Technology Categories: The Check Me! program looks at air flow and refrigerant charge to optimize unit operation. Duke Energy Ohio tested this program on low-income homes and found 10% to 15% savings from these improvements.

Market Barriers: Consumers, as well as many contractors, do not maintain and test their air conditioning equipment to insure proper and efficient operation. This lack of knowledge and motivation to test the units causes many systems to be under- or over-charged with refrigerant or not have proper airflow. This increases the consumer's energy use and energy bill. It also causes an unnecessary increase in load on the Duke Energy Ohio system at peak. Direct assistance is required to make appropriate equipment improvements.

Components of Delivery:

Incentives: Duke Energy Ohio pays a \$100 incentive for the unit testing which is typically 1/3 of the cost.

Education/Training: Duke Energy Ohio provides the training through Proctor Engineering to the technicians at the participating companies.

Marketing: This will be marketed through the participating contracts in the pilot program.

Market Support: Proctor Engineering, the developers of Check Me!, and another yet to be determined local engineering firm will provide technical support.

Delivery Organizations: Yet to be determined HVAC contractors will provide the infield services for the pilot. Proctor Engineering provides the software, training, tracking and technical support.

Quality Control/Monitoring: Quality control and monitoring occurs through the Proctor tracking system as well as through field monitoring by Duke Energy Ohio or a subcontractor.

Other Standards for Participation: Proctor Engineering establishes adjustment guidelines. If a unit is replaced, efficiency of the existing unit will be SEER 13.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$32,500.

Expected Participation: The test will consist of 250 units for the first year and double each year if successful.

Savings per Participant: 394 kWh 0.35 kW

Cost Effectiveness: Cost effectiveness results are UCT 3.75; TRC 16.26; RIM 1.08

3. Smart Saver[®]/Summer Saver

Electric Measures : Heat Pumps and Air Conditioners

The electric portion of the Smart Saver[®]/Summer Saver program provides market incentives and market support to consumers, heating contractors and new home builders to promote the use of high efficiency heat pumps with electronically commutated motors (ECM) and high efficiency Energy Star central air conditioners. Monetary incentives and technical support to trade ally sales personnel stimulate demand for the high efficient equipment options. This program will be jointly implemented with the Duke Energy Indiana territory to reduce administrative costs and leverage promotion.

Target Market: In the residential new home market, builders and new homeowners are targeted. In the existing home market we target heating contractors and Duke Energy Ohio consumers who purchase new heating systems or cooling systems for their homes.

Technology Categories Included: SEER 14 or higher heat pumps with ECM motors, SEER 14 or higher central air conditioners including devices that increase efficiency on these two items; thermal expansion valves, fan delay relay switches, new higher efficiency refrigerants and new compressor technologies. Incentives vary based on inclusion of the ECM motor. Technology levels may change over time in response to changes in technology, market acceptance and upgrades to national or state efficiency codes.

Market Barriers Addressed: There are several barriers addressed through the program, but the most common is the higher price of high efficiency HVAC systems. We address this with incentives to the builder or consumer to mitigate the additional expense. However, the most important way to address the higher price is to educate all builders, HVAC personnel and consumers about the payback for purchasing a high efficiency system. The second barrier is builder and heating contractor participation. Through education, in-field sales support and incentives to builders and HVAC sales personnel, more high efficiency systems are promoted to consumers because the sales person is more knowledgeable and they understand the benefits to the consumer. Additional support is provided through manufacturer relationships that help coordinate promotions for the same high efficiency technologies. The Smart Saver[®]/Summer Saver program also works in coordination with the national Energy Star initiatives which label high efficiency equipment for easy market recognition and score homes higher if they have high efficiency heating and/or cooling equipment.

Components of Delivery:

Incentives: Incentives or “consumer rewards” are available to three parties: builders, heating dealers and consumers. Heating dealers are usually the party that completes the application for incentives, as they are most aware of the technical information needed to certify the efficiency of the HVAC system. Proposed incentives are:

- Central AC = \$250
- Heat Pumps with ECM motors = \$350

Incentives levels may change over time in response to market and price changes.

Education/Training: Training is provided to heating dealer technicians, sales personnel, and owners. Builders are provided with training through local and state homebuilder associations. Consumers are educated through pamphlets, bill stuffers, web sites, and primarily through the trade ally network.

Marketing: Marketing support includes advertising support, heating and cooling cost estimates, payback estimates, brochures, web site information, testing sites for technicians and technical support for all parties.

Market Support: Duke Energy has developed a team of Account Managers to support all needs of the builders, heating dealers and consumers in its Duke Energy Indiana territory and will utilize those experts to help jump-start the program. The team disseminates all program information, receives daily calls from builders, dealers and consumers, processes all applications and awards all incentives. In addition to the normal marketing support needed for this program, the residential DSM team also is considered an excellent resource for any energy related question about heating, cooling, home building, insulation and energy usage. It is this field support that allows this program to run as efficiently as it possibly can.

Program Delivery: Duke Energy Ohio will use its residential DSM team to implement this program. In the Duke Energy Indiana territory, the Duke Energy team has 14 years experience with the Smart Saver[®] program and each of the account managers have 25 years or more experience in energy conservation and energy technologies. Those resources as well as new Ohio based resources will be trained and utilized to expand capabilities in Ohio.

Quality Control/Monitoring: Participating heating dealers must have a certified heat pump technician. Certification may be from RSES or NATE. Homes receiving incentives are randomly selected and inspected for compliance. The individual who is responsible for the proper equipment to be installed signs every application. The model numbers for every job are confirmed as high efficient models in the ARI standards.

Other Standards for Participation: Home listed on the application must be a single family home, condominium, or duplex. Dwellings not eligible are apartments, mobile homes, commercial or other non-residential buildings. New system listed on the application must serve the entire home or if there is more than one system, all systems must meet the SEER minimum requirement. Total system airflow must be adequate for the new system, according to ACCA's Manual D. A certified technician name is asked for on each application.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$404,300.

Expected Participation: For the first year, the expected participation is 100 Heat Pumps with ECM motors and 1000 Central Air Conditioners.

Savings per Participant:

- Central AC 280 kWh 0.25 kW
- Heat Pumps with ECM motors 922 kWh 0.29 kW

Cost Effectiveness: Cost effectiveness results are:

Heat Pumps with ECM Motors UCT: 1.94, TRC: 1.74, RIM: 0.54
Central Air Conditioners UCT: 1.80, TRC: 8.48, RIM: 0.85

Gas Measures: Gas Furnaces and Gas Furnaces with ECM Motors

The gas portion of the Smart Saver[®]/Summer Saver program provides market incentives and market support to consumers, heating contractors and new home builders to promote the use of high efficiency high efficiency gas furnaces with and without ECM motors. Monetary incentives and technical support to trade ally sales personnel stimulate demand for the high efficient equipment options. This program will be jointly implemented with the Duke Energy Indiana territory to reduce administrative costs and leverage promotion.

Target Market: In the residential new home market, builders and new homeowners are targeted. In the existing home market we target heating contractors and Duke Energy Ohio consumers who purchase new heating systems for their homes.

Technology Categories Included: Gas furnaces with efficiencies at or above 90% AFUE with and without ECM motors. Incentives vary based on inclusion of the ECM motor. Technology levels may change over time in response to changes in technology, market acceptance and upgrades to national or state efficiency codes.

Market Barriers Addressed: There are several barriers addressed through the program, but the most common is the higher price of high efficiency systems. We address this with incentives to the builder or consumer to mitigate the additional expense. However, the most important way to address the higher price is to educate all builders, HVAC personnel and consumers about the payback for purchasing a high efficiency system. The second barrier is builder and heating contractor participation. Through education, in-field sales support and incentives to builders and HVAC sales personnel, more high efficiency systems are promoted to consumers because the sales person is more knowledgeable and they understand the benefits to the consumer. Additional support is provided through manufacturer relationships that help coordinate promotions for the same high efficiency technologies. The Smart Saver[®]/Summer Saver program also works in coordination with the national Energy Star initiatives which label high efficiency equipment for easy market recognition and score homes higher if they have high efficiency heating and/or cooling equipment.

Components of Delivery:

Incentives: Incentives or “consumer rewards” are available to three parties: builders, heating dealers and consumers. Heating dealers are usually the party that completes the application for incentives, as they are most aware of the technical information needed to certify the efficiency of the HVAC system. Proposed incentives are:

- Gas Furnaces = \$300
- Gas Furnaces with ECM motors = \$550

Incentives levels may change over time in response to market and price changes.

Education/Training: Training is provided to heating dealer technicians, sales personnel, and owners. Builders are provided with training through local and state homebuilder associations. Consumers are educated through pamphlets, bill stuffers, web sites, and primarily through the trade ally network.

Marketing: Marketing support includes advertising support, heating cost estimates, payback estimates, brochures, web site information, testing sites for technicians and technical support for all parties.

Market Support: Duke Energy has developed a team of Account Managers to support all needs of the builders, heating dealers and consumers in its Duke Energy Indiana territory and will utilize those experts to help jump-start the program. The team disseminates all program information, receives daily calls from builders, dealers and consumers, processes all applications and awards all incentives. In addition to the normal marketing support needed for this program, the residential DSM team also is considered an excellent resource for any energy related question about heating, home building, insulation and energy usage. It is this field support that allows this program to run as efficiently as it possibly can.

Program Delivery: Duke Energy Ohio will use its residential DSM team to implement this program. In the Duke Energy Indiana territory, the Duke Energy team has 14 years experience with the Smart Saver[®] program and each of the account managers have 25 years or more experience in energy conservation and energy technologies. Those resources as well as new Ohio based resources will be trained and utilized to expand capabilities in Ohio.

Quality Control/Monitoring: Participating heating dealers must have a certified technician. Certification may be from RSES or NATE. Homes receiving incentives are randomly selected and inspected for compliance. The individual who is responsible for the proper equipment to be installed signs every application. The model numbers for every job are confirmed as high efficient models in the ARI standards.

Other Standards for Participation: Home listed on the application must be a single family home, condominium, or duplex. Dwellings not eligible are apartments, mobile homes, commercial or other non-residential buildings. New system listed on the application must serve the entire home or if there is more than one system, all systems must meet the AFUE minimum requirement. Total system airflow must be adequate for the new system, according to ACCA's Manual D. A certified technician name is asked for on each application.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$2,307,500.

Expected Participation: For the first year, the expected participation is 5000 Gas Furnaces and 500 Gas Furnaces with ECM motors.

Savings per Participant:

- Gas Furnaces 451 therms
- Gas Furnaces with ECM motors 772 kWh 0.24 kW 451 therms

Cost Effectiveness: Cost effectiveness results are:

Gas Furnaces UCT: 8.31, TRC: 2.87, RIM: 0.77

Gas Furnaces with ECM Motors UCT: 5.52, TRC: 2.46, RIM: 0.77

4. Power Manager

The purpose of the Power Manager program is to reduce demand by controlling residential air conditioning usage during peak demand conditions in the summer months. The program is offered to residential consumers with central air conditioning. Duke Energy Ohio would attach a load control device to the consumer's compressor to enable Duke Energy Ohio to cycle the consumer's air conditioner off and on when the load on Duke Energy Ohio's system reaches peak levels. Consumers receive financial incentives for participating in this program based upon the cycling option selected. This program will be jointly implemented with the Duke Energy Indiana and Duke Energy Kentucky territories to reduce administrative costs and leverage promotion.

Target Market: Homes in the Duke Energy Ohio territory with central air conditioners.

Technology Categories: This program addresses central air conditioners and cycles those units during times of peak load via a paging system. There are two levels of cycling in which a consumer can opt for participation. These levels then determine the amount of cycle time the unit is off. Typical temperature increases within the home during the time of cycling is 1-2 degrees.

Market Barriers: Central air conditioners cause high demands on the Duke Energy Ohio system during the summer. The Power Manager program offers an opportunity to reduce that load with little impact on comfort. This program provides a way to show consumers the value of such load reduction and provides the utility with cost effective load reductions that save all consumers money.

Components of Delivery:

Incentives: Participants receive a one-time sign up incentive and then a Variable Daily Event Incentive for each day that the A/C system is cycled. For any given day, the Variable Daily Event Incentive is based on the kW Reduction selected by the consumer, the number of hours that the A/C system is cycled on any given day and the real time value of electric energy during the control event. If a consumer selects Option A, their air conditioner is cycled to achieve a 1 kW reduction in load. If a consumer selects Option B, the air conditioner is cycled to achieve a 1.5 kW load reduction. Incentives are provided at the time of installation: \$25 for Option A and \$35 for Option B. In addition, when a cycling event occurs, a Variable Daily Event Incentive based upon marginal costs is also provided.

Education/Training: Duke Energy Ohio provides education information to consumers on the program and ways to stay cool during the hot summer peak days.

Marketing: Direct mail is the primary method of recruitment for interested consumers.

Market Support: HVAC contractors have been notified about the program and the control equipment used.

Delivery Organizations: The program is delivered through GoodCents Solutions, a national energy services provider, who was chosen through a competitive bid process.

Quality Control/Monitoring: Duke Energy Ohio completes consumer follow up inquires and performs random field visits of the installations.

Budget: Total Budget request for the program is outlined in Appendix A. For the first year of the program, the request is \$960,533, rising to over \$3,000,000 per year as the program ramps up.

Expected Participation: For the first year, the expected consumer participation is 2,000.

Savings per Participant: Option A 1.0 kW Option B 1.5 kW Average 1.38 kW

Cost Effectiveness: Cost effectiveness results are UCT 1.56; TRC 2.05 RIM 1.56

5. Energy Star Products

The Energy Star Products program provides market incentives and market support through retailers to build market share and usage of Energy Star products. Special incentives to buyers and in-store support stimulate demand for the products and make it easier for store participation. The program targets Residential consumers' purchase of specified technologies through retail stores and special sales events. The first year of the program focuses on compact fluorescent lamps (bulbs) and torchiere lamps. This program will be jointly implemented with the Duke Energy Kentucky territory to reduce administrative costs and leverage promotion.

Target Market: Residential consumers purchase of specified technologies through retail stores.

Technology Categories: The first year of the program will focus on compact fluorescent lamps (bulbs), and torchiere lamps.

Market Barriers: There are several barriers addressed through the program. The first is price. Purchase rewards are provided for consumers to lower first cost of the item and stimulate interest. The second barrier is retailer participation. Through retail education, in-field sales support (signs, ads, etc), and stimulated market demand retailers stock more product, provide special promotions and plan sales strategies around these Energy Star products. Additional support is provided through manufacturer relationships that often can reduce prices through special large-scale purchases. Coordination will occur with the national Energy Star initiatives such as "Change a Light, Change the World" promotion.

Components of Delivery:

Incentives: Incentives or "consumer rewards" will be available in two ways, through mail-in forms available from the retailer and through special in-store "Instant Reward" events that occur in-store at the time of purchase. Initial proposed incentive levels are:

- CFL's = \$2 per bulb
- Torchiere lamps = \$20 per lamp

Incentives may change based on market prices and response as well as manufacturer/distributor co-funding.

Education/Training: Training will be provided to sales staff of the retailers and sales aids provided.

Marketing: Marketing support will include point of purchase displays and materials, cooperative advertising, coupons, and special "instant sales events". Public relations materials will also be used.

Market Support: The key to this program that is different from past utility rebate programs is market support. "Circuit Riders" will visit each store at least every six months to provide materials, training and label product. This in-field support eliminates

many of the barriers that retailers have to promoting this program. Another portion of the market support is coordination with manufacturers on a national level. Working with the national and regional Energy Star efforts, Duke Energy Ohio will be able to leverage quantities and reduce prices in the marketplace.

Delivery Organizations: Duke Energy Ohio proposes to use the Wisconsin Energy Conservation Corporation (“WECC”) to provide this service. Recognized as the national leader in this program and located in the region, Duke Energy Ohio can take advantage of WECC’s current activity to control costs and leverage other activity in the mid-west.

Quality Control/Monitoring: Monitoring occurs through reward verification tracking and in-store assessments by the Circuit Riders.

Other Standards for Participation: Technologies must be listed as complying with Energy Star standards as posted on the Energy Star web site.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$2,008,640.

Expected Participation: Expected participation for the first year is 500,000 CFL bulbs, and 1,800 Torchiere lamps.

Savings per Participant: CFL 66 kWh 0.02kW Torchieres 388 kWh 0.12 kW

Cost Effectiveness: Cost effectiveness results are
CFL’s - UCT 12.55; TRC 12.55; RIM 1.04
Torchieres – UCT 7.38, TRC 5.26, RIM 0.98

6. Energy Efficiency Website

Energy Zone™ is Duke Energy Ohio's enhanced energy efficiency web site. It provides Duke Energy Ohio consumers the most advanced programs, tools, and measures available to manage their energy and achieve load impacts. The website features a multi-tiered design providing the consumer the opportunity to receive quick customized energy tips and, if they choose, the ability to complete an online audit and receive ten (10) self-install energy efficiency measures. The marketing of the Energy Efficiency Website is an initiative meant to diversify and increase the reach of Duke Energy Ohio's DSM programs.

Target Market: With over 70% of Duke Energy Ohio consumers having access to the Internet in either their homes or at work, the target market is comprised of those individuals who do not have the time or logistically cannot be available for the Home Energy House Call audit program.

Technology Categories: The Energy Efficiency Starter Kit provides the consumer with the following measures:

- (1) 15w CFL Bulb
- (1) 20w CFL Bulb
- (1) 2.0 GPM Earth Showerhead
- (1) Dual Setting Touch Flow Kitchen Aerator with Swivel
- (1) 1.5 GPM Standard Faucet Aerator
- (1) LimeLite Nite Light
- (1) Package of Toilet Dye Tablets
- (2) Switch/Outlet Draft Stoppers
- (1) Energy Star Efficiency Guide

Market Barriers: The largest barrier to success of the program is making the consumer aware of the website. For those consumers interested in how they use energy and lowering their energy bill, the website contains the audit tool, an appliance calculator, efficient products e-catalog and a library of energy information. The challenge is to get them to visit the website, which will happen primarily through direct marketing to the end user and promotion through the Call Center Consumer Service Representative.

Components of Delivery:

Incentives: The Energy Efficiency Starter Kit is the incentive for the website program. The kit will be sent to every consumer who completes the Quick-e-Audit.

Education/Training: The Consumer Service Representative in the Call Center will receive training on the program.

Marketing: Marketing will be conducted through direct mail and Call Center Representatives.

Market Support: No additional support is needed.

Delivery Organizations: The Duke Energy Ohio DSM department will have oversight for the delivery of the program.

Quality Control/Monitoring: The tracking of consumer usage pre/post completing the Quick-e-Audit is important to determine the installation of measures.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$137,700.

Expected Participation: Target participation for the first year is 6,000 people completing audits and receiving kits.

Savings per Participant: 205 kWh 0.06 kW

Cost Effectiveness: Cost effectiveness results are UCT 6.18; TRC 23.83; RIM 0.96

7. Ohio Energy Project (NEED)

The Ohio Energy Project, a part of the National Energy Education Development (NEED), was previously part of the Ohio Collaborative activities before deregulation. The DECP Board would like to restart the support of this important education program for Ohio. NEED was launched in 1980 to promote student understanding of the scientific, economic, and environmental impacts of energy. The program is currently available in 36 states, the U.S. Virgin Islands, and Guam. The Ohio Energy Project (NEED) activities provide teachers and students in Ohio with the materials, skills and classes to promote energy education in the classroom. The program will also provide a limited number of energy efficiency “kits” that will allow students to directly install energy efficiency items in their homes as it relates to their curriculum. This allows learning and direct savings from the program. Duke Energy also supports NEED activities in its Kentucky and Indiana territories.

Target Market: The Ohio Energy Project (OEP) targets schools, teachers and students in the Duke Energy Ohio territory.

Technology Categories: The OEP looks at all energy sources and efficiency technologies. The kits will provide low cost savings measures such as compact fluorescent bulbs, low flow shower heads, gasket covers and faucet aerators.

Market Barriers: Energy education of our future leaders and citizens is critical to long term positive attitudes towards energy efficiency. By educating students about energy, they can then take those concepts and practices to their home to start saving energy immediately as well as for the long term. This program provides the tools, materials and curriculum to complete that education for long term impacts.

Components of Delivery:

Incentives: Free curriculum materials and kits are provided to schools as well as teacher education courses on how to use the materials. There are no other direct incentives.

Education/Training: OEP educates not only the teachers, but utilizes a peer “student-to-student” approach to expand its use of the curriculum. OEP also ties the education requirements of the school system and their learning outcomes to the materials. This allows the teachers to incorporate energy education to their overall outcome goals.

Marketing: Schools and teachers will be recruited directly by the OEP staff and their education network.

Market Support: This program is supported by the national NEED program activities, the programs in Duke Energy’s KY and IN service territories, as well as Duke Energy staff.

Delivery Organizations: The program is delivered through the Ohio Energy Project.

Quality Control/Monitoring: Teachers and students are asked to complete a survey of the measures they installed and the condition of the existing measures in their home. This information will be used to determine savings from the kits installed as part of the program. Teachers also provide feedback on the usefulness of the materials directly to OEP. Last control is an advisory group to OEP by a set of educators to help direct the program.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$165,000.

Expected Participation: There will be 1000 energy efficiency kits provided as part of the overall focus on energy conservation and efficiency program. Additionally OEP expects to train 800 teachers and 11,000 students per year.

Savings per Participant: 300 kWh 0.09 kW

Cost Effectiveness: Cost effectiveness results are UCT: 1.78; TRC: 19.54; RIM: 0.65.

8. Appliance Turn-In

Older vintage room air conditioners (room AC) can be one of the least efficient electrical appliances in the home. Often these old units are used when they are not functioning properly and as a result use electricity very inefficiently. To encourage consumers to dispose of their old room air conditioners and purchase efficient Energy Star models, the DECP proposes a room AC turn-in program. Located at retailer locations during special promotions, participants would receive coupons towards more efficient units if they turn in an old unit. Units received will be recycled through a certified recycling agency.

Target Market: Duke Energy Ohio residential consumers with old room air conditioners.

Technology Categories: Room air conditioners that the participant can bring to a drop off point. Coupons will be provided towards Energy Star room air conditioners.

Market Barriers: Room AC units often are inefficient and ineffective without the user realizing it. The fan may continue to run while the compressor is not functioning properly. This causes a barrier due to lack of knowledge and lack of stimulation to change out that unit. This program provides both the education and stimulation to remove and replace the inefficient unit.

Components of Delivery:

Incentives: Incentives will be provided on two levels, first an incentive to turn in the old unit and the second an additional incentive to upgrade to an Energy Star room AC unit. The logic for the two-level incentive approach is to get units recycled even if the participant is not replacing the old unit, as they may be going to a central AC system. Participants would receive a \$15 coupon to drop off their old unit good towards anything in the store, and another \$35 coupon towards a new Energy Star room AC unit, both good at the sponsoring retailers' facility. This approach will mitigate free-rider costs and maximize the number of units recycled.

Education/Training: Education will occur through the promotion of the program as well as by the retailers' within the store.

Marketing: Marketing will be through co-op advertising with the retailers' for the special limited time events.

Market Support: Duke Energy Ohio will hire a subcontractor to coordinate and implement this program. Additional market support will be through Duke Energy/ Duke Energy Ohio marketing and working with the national Energy Star program.

Delivery Organizations: A competitive bid process will be used to select a subcontractor to implement the program.

Quality Control/Monitoring: Duke Energy Ohio will monitor events by the subcontractor for compliance. Units received and recycled will also be tracked to determine impacts.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$105,000.

Expected Participation: The program expects to collect and recycle 1,000 room air conditioners annually.

Savings per Participant: 175 kWh 0.16 kW

Cost Effectiveness: Cost effectiveness results are UCT 1.67; TRC 3.19; RIM 0.78

9. Personalized Energy Report Pilot Program

The Personalized Energy Report (PER) will provide the Duke Energy Ohio consumer with a customized energy report aimed at helping them better manage their energy costs. With rising energy costs in all aspects of daily life, the consumer is searching for information they can use and ideas they can implement which will impact their monthly energy bill. The PER program also includes the “*Energy Efficiency Starter Kit*” which is nine easily installed measures which demonstrate how easy it is to move towards improved home energy efficiency.

Target Market: The program will target single family residential consumers in the Duke Energy Ohio market that have not received measures through the Home Energy House Call energy efficiency audit or a weatherization program within the last three years.

Technology Categories: Program targets the entire home from an energy usage standpoint. The consumer will be provided energy tips and information regarding how they use energy and what simple, low cost/no cost measures can be undertaken to lower their energy bill.

Market Barriers: Lack of consumer education on how they individually consume energy in their home and the steps which can be taken to lower energy bills are the major hurdles to overcome. This program is meant to educate the consumer and put at their disposal, information, customized tips and simple to install measures which can all lower their energy costs.

Components of Delivery:

Education/Instructions: Both the energy survey which is completed by the consumer and generates the personalized energy report and the report itself are excellent educational tools. They will stimulate the consumer to think about how they use energy and then will provide them with tools and information to lower their energy costs. Additionally, the instructions on how to install the energy measures will demonstrate to the consumer how easy it is to improve their efficiency.

Marketing: The PER program commences with a letter to the consumer, offering the Personalized Energy Report if they would return a short, 14 question survey about their home. The survey asks very simple questions such as age of home, number of occupants, types of fuel used to heat, cool and cook. Once returned, the survey is used to generate a customized energy report.

Delivery: The program is delivered completely through Duke Energy Ohio

Quality Control/Monitoring: Duke Energy Ohio will complete a follow-up survey with a sub segment of the consumers who received the offer and those who also responded to determine what drove their responses. Additionally, the survey to those consumers who

did receive a customized energy report will also include questions regarding installation of the measures found in the “*Energy Efficiency Starter Kit*”.

Materials:

Personalized energy report: The report will contain the following information:

- Month-to Month Comparisons of 2005 for electric and/or gas usage including the amount of the bill
- Predictions of consumer’s usage based on 95th percentile weather conditions (extremely hot summer/extremely cold winter) and 5th percentile weather conditions (extremely mild summer/extremely mild winter). Also includes bill amounts based on 2006 tariffs.
- Trend chart showing usage of electric and/or gas by kWh/CF by month and amount of monthly bill
- Bill comparison of Duke Energy Ohio vs. the average national electric and/or gas rate
- A disaggregation of how the consumer uses electricity and/or gas
- Description of Budget Bill
- Customized energy tips

Customized tips will be based upon the consumers specific answers to questions in the survey. As an example

- If the age of the home is over 30 years, plastic window kits would be a recommended measure
- If over 50% of the ducts are in the attic, adding duct insulation would also be a measure.

“*Energy Efficiency Starter Kit*”: The kit will be sent to the consumer in conjunction with the personalized energy report. The kit contains the following items:

- 1 each 1.5 GPM showerheads
- 1 each Kitchen Swivel Aerator 1.5 GPM
- 1 each Bathroom Aerator 1.0 GPM
- 1 each Small Roll Teflon Tape
- 1 each 15 Watt CFL (Energy Star)
- 1 each 20 Watt CFL (Energy Star)
- 1 each 17’ Roll of Closed Cell Foam Weatherstrip
- 1 each Combination Pack (6) Switch/Outlet Gasket Insulators
- Installation instructions for all measures

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$ 1,077,736.

Expected Participation: The program expects to reach 52,800 consumers.

Savings per Participant: Duke Energy is using a similar kit in the Home Energy House Call and NEED programs with great success. In those programs, the average participant is saving between 240 and 360 kwh and between 10 and 16 therms per year.

Cost Effectiveness: Cost effectiveness results are UCT 9.33; TRC 29.72; RIM 0.62

10. PRE-PAID BILLING SERVICES

Providing consumers with the option of paying for their electrical use prior to consumption not only allows consumers to control their bills, but promotes energy savings. Implemented by several utilities around the country, “Pre-Paid Billing Services” or pre-paid meters provides participants with the metering to understand their energy usage and has resulted in 10% to 20% energy savings. The DECP is proposing to test this concept recruiting 100 consumers per year for the next four years and analyzing their energy savings compared to a control group.

Target Market: Owner occupied single-family homes throughout the Duke Energy Ohio territory.

Technology Categories: Duke Energy Ohio will utilize one of the pre-paid metering devices available on the market.

Market Barriers: Consumers cannot usually see the impacts from changing the operation of equipment or lifestyle habits with normal utility meters. A pre-paid meter system allows consumers to see those impacts on a real-time basis. This provides immediate feedback and enables consumers to realize that the steps they took to modify their behavior to be more efficient actually saved money. It also allows consumers to adjust their payments to the utility to better meet their personal schedules and cash flow.

Components of Delivery:

Incentives: There are no direct incentives provided to the consumer. Incentives are provided through the consumer’s ability to control their utility costs, payment and usage.

Education/Training: Education materials will be developed that describe the use and benefits of the pre-paid billing service.

Marketing: The primary method of participant recruitment is through direct mail to Duke Energy Ohio consumers by zip code areas. Other information is provided through bill stuffers, and call center referrals.

Market Support: Participants will be supported by the Duke Energy Ohio staff and call center. The equipment contractor will provide technical support.

Delivery Organizations: A competitive bid process will be used to chose a subcontractor to implement the program.

Quality Control/Monitoring: Duke Energy Ohio will monitor the subcontractor through random inspections of sites and review of the billing systems. Consumer satisfaction surveys will be conducted. A full evaluation of the energy and bill paying impacts of this program will be conducted.

Budget: Total Budget request for the program is outlined in Appendix A. The first year request is \$287,000.

Expected Participation: Duke Energy Ohio will recruit 100 participants per year.

Savings per Participant: 10% of bill or 1565 kWh 0.49 kW

Cost Effectiveness: Cost effectiveness results are UCT 4.70; TRC 4.70; RIM 0.84

COMMERCIAL PROGRAMS

1. Commercial & Industrial Prescriptive Incentive Program

The Commercial & Industrial prescriptive incentive program provides incentives to commercial and industrial consumers to install high efficiency equipment in applications involving new construction, retrofit, and replacement of failed equipment. This program will be jointly implemented with the Duke Energy Indiana and Duke Energy Kentucky territories to reduce administrative costs and leverage promotion. The current PSI program has been in effect for many years and promotes limited prescriptive incentives for motor, lighting and cooling equipment types. This application expands the program to include additional technologies covering more applications and end uses. This will allow more consumers to participate and avoid lost opportunities for high efficiency equipment in the marketplace.

Target Market: All Duke Energy Ohio commercial or industrial consumers except those receiving service under Rate TS, Service at Transmission Voltage.

Technology Categories: The list of technologies includes refrigeration, variable frequency drives, pumps, controls, motors, lighting, and HVAC equipment. A full listing of technologies covered is provided in Appendix B.

Market Barriers: The small to medium sized commercial and industrial consumer can have significant energy consumption, yet is not frequently served by the Energy Services Market. These consumers lack knowledge and may not understand the benefits of high efficiency alternatives. They may feel that the payback period for energy efficient equipment is too long. Duke Energy Ohio's program provides financial incentives to help reduce this cost differential and improve return. It also provides market demand where the dealers and distributors, or market providers, will stock and provide these high efficient alternatives as they can see increased demand for the products. Duke Energy Ohio provides these market providers with additional information and support so that they better understand the best applications for these technologies.

Components of Delivery:

Incentives: Incentives are provided based on Duke Energy Ohio's cost effectiveness modeling but with a high-end limit of 50% of measure cost. This approach assures cost effectiveness over the life of the measure.

Education/Training: Duke Energy Ohio provides education and training to its market providers to understand the program and the appropriate applications for the technologies.

Marketing: Marketing to consumers and market providers is through mailings.

Market Support: Market support varies by technology. Most technologies included

within the program are proven and in the marketplace, though not widely applied. Duke Energy Ohio will provide to market providers additional support and education on newer technologies that have lesser acceptance.

Delivery Organizations: Duke Energy Ohio will use its current skilled DSM team to manage and implement the program. Additional outside technical assistance will be retained to analyze technical applications and provide consumer/market provider assistance as necessary.

Quality Control/Monitoring: To assure appropriate installation of equipment, applications for incentives will be reviewed and checked for accuracy and whether measures meet appropriate standards. Random field inspections will occur to assure installation.

Other Standards for Participation: Varies by technology.

Budget: Total Budget request for the program is outlined in Appendix B. The first year request is \$1,611,243.

Expected Participation: See Appendix B for details on expected application of each technology.

Savings per Participant: As there are numerous technologies, those are listed individually in Appendix B.

Cost Effectiveness: Cost effectiveness results were developed by technology and are included in Appendix B, page 1.

School Incentive Program

Due to the special needs of schools and recognizing that saving energy costs in schools helps all taxpayers, Duke Energy Ohio and the DECP are proposing that \$500,000 be set aside as part of the Commercial and Industrial Prescriptive Incentive Program budget for school measures and support. The measures identified for the Commercial and Industrial Prescriptive Incentive Program in this application can help schools reduce their energy consumption. Additional measures will be identified as Duke Energy Ohio works with the schools to assess energy saving opportunities. If all of the funds are not used by the schools within the year, they will be made available to other applicable commercial and industrial consumers. Likewise, if funds applicable to the Commercial and Industrial Prescriptive Incentive Program are not used by other commercial and industrial consumers, those funds will be made available to the schools above the earmarked amount.

The School Incentive Program provides incentives to schools to install high efficiency equipment in applications involving new construction, retrofit, and replacement of failed equipment. This program will be jointly implemented with the proposed Commercial and Industrial Prescriptive Incentive Program.

Target Market: All school consumers of Duke Energy Ohio except any school that may receive service under Rate TS, Service at Transmission Voltage.

Technology Categories: The list of technologies includes refrigeration, variable frequency drives, pumps, controls, motors, lighting, and HVAC equipment. A full listing of technologies covered is provided in Appendix B.

Market Barriers: The small to medium sized school consumer can have significant energy consumption, yet is not frequently served by the Energy Services Market. These consumers lack knowledge and may not understand the benefits of high efficiency alternatives. They may feel that the payback period for energy efficient equipment is too long. Duke Energy Ohio's program provides financial incentives to help reduce this cost differential and improve return. It also provides market demand where the dealers and distributors or "market providers" will stock and provide these high efficient alternatives as they can see increased demand for the products. Duke Energy Ohio provides these market providers with additional information and support so that they better understand the best applications for these technologies.

Components of Delivery:

Incentives: Incentives are provided based on Duke Energy Ohio's cost effectiveness modeling but with a high-end limit of 50% of measure cost. This approach assures cost effectiveness over the life of the measure.

Education/Training: Duke Energy Ohio provides education and training to its market providers to understand the program and the appropriate applications for the technologies.

Marketing: Marketing to consumers and market providers is through mailings.

Market Support: Market support varies by technology. Most technologies included within the program are proven and in the marketplace, though not widely applied. Duke Energy Ohio will provide to market providers additional support and education on newer technologies that have lesser acceptance.

Delivery Organizations: Duke Energy Ohio will use its current skilled DSM team to manage and implement the program. Additional outside technical assistance will be retained to analyze technical applications and provide consumer/market provider assistance as necessary.

Quality Control/Monitoring: To assure appropriate installation of equipment, applications for incentives will be reviewed and checked for accuracy and whether

measures meet appropriate standards. Random field inspections will occur to assure installation.

Other Standards for Participation: Varies by technology.

Budget: Total Budget request for the program is outlined in Appendix B. The first year request is \$500,000.

Expected Participation: See Appendix B for details on expected application of each technology.

Savings per Participant: As there are numerous technologies, those are listed individually in Appendix B.

Cost Effectiveness: Cost effectiveness results were developed by technology and are included in Appendix B.

2. Photovoltaic Schools Demonstration/Education Program

This program was designed to introduce Photovoltaics (“PV”) into the mix of options under Duke Energy Ohio’s DSM program. It seeks to create awareness of the technical achievements, environmental considerations, and public policy issues that have matured to make photovoltaics an option for meeting today’s energy needs. The program also focuses on educating faculty and students in the Ohio public school system about the benefits of photovoltaics as a source of renewable energy, through the installation and use of three PV demonstration units. This program has been successfully implemented in the Duke Energy Indiana territory.

Target Market: Schools located in Duke Energy Ohio’s territory interested in environmental energy generation.

Technology Categories Included: Renewable energy resources.

Market Barriers Addressed: The greatest barrier to greater entry into the commercial market is cost. Under this program, Duke Energy Ohio has reduced this to zero by assuming all cost for the acquisition, purchase, and installation of three demonstration units.

Components of Delivery:

Incentives: Duke Energy Ohio pays the expense of the PV purchase, installation, and basic monitoring.

Education/Training: This program advances the education of many parts of the market. It helps students, parents, teachers, and the school community, understand and work with PV as a potential resource. It also helps educate and build skills of contractors, electricians and other market providers for possible application in other locations. If the NEED program gets approval within this application, Duke Energy Ohio would tie curriculum development and participation in the NEED program with the PV application to leverage both activities.

Marketing: Duke Energy Ohio will work with the area school systems to choose the best locations for application. If too many applicants are available, Duke Energy Ohio will choose participants through a random selection process.

Delivery Organizations: Contractors will be chosen through an RFP process to provide the equipment and services. NEED will provide the education component of the PV program.

Quality Control/Monitoring: All installations must pass an inspection by Duke Energy Ohio engineers prior to being connected to the electric grid to ensure compatibility and safe operations. Each system becomes the property of the recipient. Meters and LED read-outs are placed at each location for monitoring solar panel output of the PV system. In addition, a data acquisition system and PC monitor each school’s system and includes software suitable for a class curriculum.

Budget: Total Budget request for the program is outlined in Appendix B. The first year request is \$75,000.

Expected Participation: Three schools per year will have systems installed.

Savings per Participant: 1716 kWh 0.54 kW

Cost Effectiveness: Cost effectiveness will vary with installation but the program's primary purpose is educational. Test results are provided to inform the reader of the results. The Collaborative and Duke Energy Ohio understands that the program is not cost effective but believes the values of this small demonstration/test are worth the investment.

Cost effectiveness results are UCT 0.07; TRC 0.27; RIM 0.07

RESEARCH PROGRAM

House Call PLUS Research Program

Opportunity: With rising energy prices, there is an opportunity to increase savings in the residential market through more comprehensive building analysis and efficiency improvements. As shown through state programs in New York and California, a comprehensive audit program, utilizing diagnostic tools such as blower doors, infrared scanners and duct leakage tests, combined with a “one-stop” installation service can be effective at getting more measures installed cost effectively, thus increasing savings from 10% to 30%. However to provide this service, the market providers such as insulation contractors and energy consultants, must learn how to effectively apply the building science, and how to use and apply the tools. The DECP sees this opportunity and wants to direct money towards research to better understand the current market capabilities and how this opportunity might effectively be implemented for consumers of Duke Energy Ohio.

Goal: The purpose of the market and applications research is to better understand the capabilities and skills of the contractors and market actors for providing the analysis services and comprehensive one-stop audit services for the Residential market.

Year 1 Research

Approach: There will be two aspects to the one year research project.

1. **Assessment of the Market:** This effort will include primary and secondary research to determine the skills and capabilities within the marketplace to provide services. The research will try to determine levels of technical expertise in building science, numbers of contractors who are NATE or BPI certified that can provide high level diagnostics, training needs and interest in the contractor community in this approach. In addition, the market assessment will try to determine the interest and understanding by homeowners in advanced diagnostics and comprehensive efficiency improvements to save not only energy, but to increase the comfort, safety and durability of their home.
2. **Applications Research:** To help determine actual costs for services, the research will include analysis and comprehensive energy improvements for a sample of 25 homes in the area. This will help DECP understand the actual costs and feasibility of the service and to improve the program design for a future potential DSM program.

The outcome of this research would be used to help define and quantify the opportunity to impact the market for long term energy savings through development of a full scale program. Based on the findings of the research, training would also begin for market providers (audit consulting contractors) for future long term implementation. It is expected that 8-10 providers would receive the in-depth training. Where possible, training would be leveraged with the contractor training provided by the Ohio Office of

Energy Efficiency.

Timeframe: Preparation and bidding for research firms – Four months after start-up
Research implementation – Next nine months
Assessment of results – Next four months
Market Provider training and equipment – Ends four months later

Budget Estimate Year 1:

- Market assessment = \$80,000
- Cost of Audit = \$500 per home x 25 homes = \$12,500
- Incentive to Consumer = 25% of cost capped at \$2000 (plus \$500 Federal credit not included in budget) = \$50,000
- Independent audit technical support and analysis of results = \$25,000
- Administration = \$15,000
- Misc. costs (equipment, materials, training, other) = \$15,000
- Market provider training & equipment = \$30,000
- TOTAL = \$212,500

Year 2 Research

Based on a successful indication of market preparation from year 1 research, DECP proposes to use the second year of the research to expand the number of homes and test consumer response to the service. It will also be used to monitor the consumption of the first 25 homes to determine energy impacts.

Approach: Year two of the research will focus on field implementation and consumer response. The number of homes served will be increased to 100 and the number of qualified contractors implementing will increase to a yet to be determined number. Incentive levels may be changed to see what the market response is to price differences.

The second aspect of the year two research will be to monitor the homes completed in the first year. These homes will have a bill analysis conducted against a control group to measure the level of impacts obtained. While it is a small sample, it should provide an indication of the level of load impacts. More reliable impact evaluations will be performed in the future.

Timeframe: Planning and program design: Two months after start of second year
Implementation: Next nine months
Impact Study: Next three months
Assessment of Market Response on 100 homes: Completed with Impact Study

Budget:

- Impact Evaluation \$30,000
- Cost of Audit = \$500 per home x 100 homes = \$50,000

- Incentive to Consumer = 15% of cost capped at \$1200 (plus \$500 Federal credit not included in budget) expecting 75% of homes to complete work = \$90,000
- Independent audit technical support and analysis of results = \$50,000
- Administration = \$15,000
- Misc. costs (equipment, materials, training, other) = \$25,000
- Market provider training & equipment = \$30,000
- TOTAL = \$290,000

Savings per Participant:

- Electrically heated homes 4700 kWh 1.48 kW
- Gas heated homes 300 therms

Cost Effectiveness: Cost effectiveness results are outlined for each year assuming that 80% of the participants would be gas consumers and 20% would be electric. The modeling did not include the evaluation and research dollars needed to complete the research, just the direct home activities and costs. Modeling results are:

Gas UCT 2.47, TRC 5.31, RIM 0.60

Electric: UCT 3.31, TRC 7.13, RIM 0.64

V. Program Evaluation Plan

Duke Energy Ohio and the Interested Stakeholders believe that third party independent evaluation is critical to the long term success of cost-effective programs. Through the evaluation process, the DECP continues to learn what programs have been most effective and how to improve existing programs over time. Duke Energy Ohio intends to direct this third party evaluation process for the Board and use standard process and impact evaluation protocols to accomplish these tasks. For the new programs, approximately \$500,000 or 5% of each program budget has been earmarked to perform the evaluations. This is at the industry standard of 3-5% for evaluation costs. The following chart outlines the range of time for the evaluations to be completed but actual timing will be based on participation rates adequate to get valid results.

Program	Evaluation Type	Earliest Timeframe for Report	Latest Timeframe for Report
C&I Program	Process	July. 2009	July. 2009
	Impact	Jan. 2009	Jan 2010
HEHC	Process	Jan. 2008	Jan. 2009
	Impact	Jan. 2010	Jan. 2011
Ohio Energy Project	Process & Impact	July 2009	July 2009
Smart Saver/Summer Saver	Process	Sept 2008	Sept. 2008
	Impact	July. 2009	July 2010
Power Manager	Impact	Annually	Annually
Energy Star Products	Process	July. 2008	July 2009
	Impact	Jan. 2009	Jan. 2010
AC Check	Process	Aug. 2008	May 2009
	Impact	May 2009	May 2009
Appliance Turn In	Process	March 2009	March 2009
	Impact	May 2009	May 2009
Energy Efficiency Website	Process	Jan 2009	Jan. 2009
	Impact	Jan. 2010	Jan. 2011
Pre-Paid Billing Service	Process	Jan 2009	Jan 2009
	Impact	Jan 2009	Jan 2009

It is expected external consultants will be used to conduct the impact evaluation studies. Methods employed to measure the impacts may include loggers to capture appliance usage times, impact studies conducted in other regions, and/or pre-/post-usage on a weather normal basis with comparison to control groups.

Quality control (QC) and verification will be an ongoing part of Duke Energy Ohio's program administration. The programs will be implemented with a 5% QC/verification target for all installations and services. Additional consumer surveys will be used to assess satisfaction. If problems with a contractor are detected, that contractor's next three installations or projects will be verified. If the problems persist, that contractor will be eliminated from the program.

VI. Recovery Mechanism

Duke Energy Ohio is committed to finding the right set of DSM programs that can cost-effectively reduce energy consumption. However, implementing a set of aggressive DSM programs raises significant risk to the Company. Since the beginning of deregulation, there has been no allowance for recovery of costs or lost revenues (net of fuel) or any incentive to encourage energy efficiency, such as a shared savings incentive.

With most DSM programs, there are many beneficiaries, primarily the program participants and the utility's other consumers. Participants in the programs save in the near term through lower bills, while consumers save over the longer term since the DSM program helps to reduce the need for more expensive purchased power from the market or building new power plants. In addition, improvements in energy efficiency reduce the demand for natural gas which can affect the level of natural gas prices. Two other groups are also impacted by the DSM programs, the utility and its shareholders. From the utility's perspective, implementing DSM programs reduces both the near-term and long-term amount of energy sold. In the near-term, the reduction in kWh and ccf sold reduces the utility's recovery of the fixed costs of its operations. Recovery of lost revenues (net of fuel) helps to fill that gap in cost recovery. From the shareholder's perspective, implementing DSM programs defers the need for investment in new facilities. Utility shareholders expect to receive a return on their investment based upon the utility's investment in its plant and equipment. DSM programs reduce the amount of these investments over time, reducing the return to shareholders and thus creating a disincentive for shareholders to pursue DSM. By providing a return to the shareholders through a "shared savings" mechanism, shareholders are given an economic incentive to

invest in DSM.

For the Company to once again aggressively pursue the implementation of DSM programs to achieve reductions in energy usage, a process for compensation and incentives for the utility and its shareholders should again be incorporated into the regulatory process. The Commission's past regulations regarding DSM contemplate recovery of lost revenues and an incentive as a way to offset regulatory or financial bias against DSM. Duke Energy Ohio proposes that the DSM rider once again include recovery of lost revenues for the three years after a DSM measure is installed (unless a rate case occurs) and incorporate recovery of a shared savings DSM program incentive for electric and natural gas DSM program implementation. These changes to the DSM rider will compensate the utility and its shareholders for the economic loss of reduced consumption, while providing a structured incentive to pursue DSM.

The Company is proposing, in these proceedings, that a set of DSM programs be implemented that are expected to reduce energy usage by more than 1.2 billion kWh and 50 million ccf over the next five years. This is a substantial reduction in energy usage which will require a commensurately substantial investment on the part of Duke Energy Ohio. Without the recovery of lost revenues and a mechanism to allow a sharing of the efficiency savings generated by the programs, the Company cannot reasonably advocate such an expansion of its DSM programs. During the five-year program period, Duke Energy Ohio proposes to limit its recovery of lost revenues to three years from the date of each DSM measure installation. In addition, Duke Energy Ohio is forgoing recovery of lost revenues and a shared savings incentive for the Personalized Energy Report Pilot program for the first year of the program. Once an evaluation of the results of the

program has been completed, Duke Energy Ohio reserves the right to seek recovery of prospective lost revenues and a shared savings incentive should the program continue.

The “lost revenues” referred to above are revenues the Company would have received, absent the implementation of DSM programs. For example, when a consumer participates in one of the DSM programs, a set of energy reducing measures are installed in the consumer’s home or business. We can calculate, through impact evaluation studies and engineering estimates, what energy and demand savings those measures will produce. We can also determine the amount of the contribution to fixed costs that Duke Energy Ohio would lose because of the installation of those measures. Duke Energy Ohio is simply seeking recovery of this lost contribution to fixed costs (*i.e.*, the “lost revenues”). Obviously, the lost revenue impact of one consumer will be small; however, over five years and assuming full participation, Duke Energy Ohio projects a significant level of lost revenues to the company. Of course, if a retail base rate case is processed and new rates are approved, this lost revenue issue would be mitigated since the rate case will true-up revenues based on actual experience in the test year. At that point, lost revenues stop accumulating on DSM measures implemented prior to the rate case, but accrue only as new measures are installed at the conclusion of the rate case test year.

Lost revenues are computed using the applicable marginal block rate net of fuel costs and other variable costs times the estimated kWh or ccf savings. Page 5 of Appendices A and B provide the estimated lost revenues associated with the proposed residential and C&I DSM programs. Over the five years, this would amount to over \$ 50 million. The lost revenues are cumulative in nature, since the revenue lost in year one, is also lost each year thereafter. The values provided in the Appendices are estimates based

upon a projected level of participation by consumers. With implementation of the proposed DSM programs, lost revenues would be calculated using the projected energy savings and actual consumer participation. Additionally, Duke Energy Ohio will update its load impacts based on the results of post-installation impact evaluation studies, engineering impact assessment studies, and benchmarking against similar programs in other states. The results of these review and evaluation activities will be used to project future energy savings.

In order to put DSM on par with alternatives such as building or buying additional generating capacity and to provide an incentive to implement DSM programs, Duke Energy Ohio believes that a shared savings incentive for both electric and gas DSM programs is appropriate. Duke Energy Ohio's proposal is a significant expansion of its DSM programs, and Duke Energy Ohio is responsible for implementing the programs in a cost effective manner. Duke Energy Ohio believes that a shared incentive of 10% for electric DSM programs and 5% for gas DSM programs is appropriate to incentivize the Company to propose and fully implement the DSM programs. As previously stated, Duke Energy Ohio's proposal is consistent with the Commission's past recognition that shared savings incentives appropriately place DSM programs on a comparable level with other capacity alternatives.

Total savings are computed using the total value created by the program as provided on page 6 of Appendices A and B. This value is net of the costs of measures, incentives to consumers, marketing, impact evaluation, and administration. The savings are estimated by simply multiplying the number of participants expected for each measure times the UCT value and then subtracting the program costs. Page 7 of

Attachments A and B summarize the calculation of the projected value or savings to residential and commercial and industrial consumers, respectively.

Duke Energy Ohio proposes to recover ten percent of that savings, a sharing of the value created, as an incentive to aggressively pursue implementation of the electric DSM programs. The recovery of the shared savings incentive will step in according to the level of achievement as follows:

1. No incentive is earned for any program that does not meet 65% of the projected program impacts at its prorated budgeted cost level.
2. 3% of the savings is earned once a program meets 65% of the projected program impacts at its prorated budgeted cost level.
3. 5% of the savings is earned once a program meets 75% of the projected program impacts at its prorated budgeted cost level.
4. 7% of the savings is earned once a program meets 90% of the projected program impacts at its prorated budgeted cost level.
5. 10% of the savings is earned once a program meets 100% of the projected program impacts at the budgeted cost level.
6. 12% of the savings is earned once a program meets 105% of the projected program impacts at the budgeted cost level.

Duke Energy Ohio proposes to recover five percent of that savings, a sharing of the value created, as an incentive to aggressively pursue implementation of the gas DSM programs. The recovery of the shared savings incentive will step in according to the level of achievement as follows:

7. No incentive is earned for any program that does not meet 65% of the projected program impacts at its prorated budgeted cost level.
8. 1.5% of the savings is earned once a program meets 65% of the projected program impacts at its prorated budgeted cost level.
9. 2.5% of the savings is earned once a program meets 75% of the projected program impacts at its prorated budgeted cost level.
10. 3.5% of the savings is earned once a program meets 90% of the projected program impacts at its prorated budgeted cost level.
11. 5% of the savings is earned once a program meets 100% of the projected

program impacts at the budgeted cost level.

12. 6% of the savings is earned once a program meets 105% of the projected program impacts at the budgeted cost level.

C. Cost Recovery

Duke Energy Ohio proposes to use DSM Riders to track actual recovery of DSM program costs, lost revenues, and shared savings. Appendices C and D provide detailed descriptions on the operation of the riders. The rider is calculated using Duke Energy Ohio's forecast of program costs, lost revenues, and shared savings. Duke Energy Ohio will annually reconcile the rider and flow back any differences between the budgeted and actual costs. In this way, Duke Energy Ohio's consumers are only charged for the actual DSM program costs, lost revenues, and shared savings.

Duke Energy Ohio proposes that program costs, lost revenues, and the shared savings incentive will be allocated and recovered based on consumer class, *i.e.*, residential consumers (Rates RS, ORH and TD) will be responsible for residential program costs; and applicable commercial and industrial consumers (Rates DM, DS, and DP) will be responsible for the commercial and industrial program costs.

Duke Energy Ohio is also including a provision in the DSM Rider for C&I consumers to obtain a reduction in their billing demand for calculation of demand charges upon a showing that one or more of the DSM measures included in this Application were implemented. This removes a disincentive to those C&I consumers billed under the demand ratchet provisions of Rates DS and DP to implement DSM measures that could reduce kW demand.

VII. Calculation of 2006 DSM Riders

A. Outline of DSM Activity

Duke Energy Ohio is planning to offer the following DSM programs in Duke Energy Ohio's service territory in 2006.

RESIDENTIAL PROGRAMS

- Home Energy House Call
- AC Check Pilot
- Smart Saver/Summer Saver
- Power Manager
- Energy Star Products
- Energy Efficiency Website
- Ohio Energy Project
- Appliance Turn-In
- Personalized Energy Report
- Pre-Paid Billing Services

COMMERCIAL PROGRAMS

- C&I Prescriptive Incentive Program
 - School Incentive Program
- Photovoltaic Schools Demonstration/Education Program

RESEARCH

- House Call Plus Research Program

B. 2006 DSM Riders

The Company, in conjunction with the Interested Stakeholders, submits the

proposed DSM Riders (Appendices F and G). These riders are intended to recover 2006 program costs and the associated lost revenues and shared savings. In subsequent years, the riders will also be used to reconcile any differences between actual and projected costs, lost revenues, and shared savings. The 2006 level of expenditures and recovery will depend upon the timing of application approval. Pages 1 through 5 of Appendix E provide the current calculation of the riders and the format for future reconciliations. Appendix E, page 1 of 5, demonstrates how a current reconciliation of the DSM Revenue Requirement would be associated with a prior reconciliation. The true-up adjustment will be based upon the difference between the actual DSM revenue requirement and the revenues collected during the most recent period.

Attachment E, page 5 of 5 contains the calculation of the 2006 Residential DSM Rider rates. This calculation includes any reconciliation adjustments shown in Attachment E, page 1 of 5 and the DSM revenue requirement for 2006. The residential DSM revenue requirement for 2006 includes the costs associated with the proposed Residential DSM programs and the associated net lost revenues and shared savings (Attachment E, pages 2 and 3 of 5). Total revenue requirements are incorporated along with the projected electric and gas volumes (Attachment E, page 4 of 5) in the calculation of the Residential DSM Rider.

Attachment E, page 5 of 5 also contains the calculation of the 2006 C&I DSM Rider. The calculation includes any reconciliation adjustments calculated in Attachment E, page 1 of 5 and the DSM revenue requirement for 2005. The C&I DSM revenue requirement for 2006 includes the costs associated with the C&I DSM program (C&I High Efficiency Incentive) and the associated net lost revenues and shared savings

(Attachment E, pages 2 and 3 of 5). Total revenue requirements are incorporated along with the projected electric volumes (Attachment E, page 4 of 5) in the calculation of the C&I DSM Rider.

The Company's proposed 2006 DSM Riders, shown as Attachments F and G, are proposed to be effective with the first billing cycle in the month following application approval and are applicable to service provided under Duke Energy Ohio's electric service tariffs as follows:

Residential Electric Service provided under:

Rate RS, Residential Service, Sheet No. 30

Rate ORH, Optional Residential Service with Electric Space Heating, Sheet No.

33

Rate TD, Optional Time-of-Day Rate, Sheet No. 34

Non-Residential Electric Service provided under:

Rate DS, Service at Secondary Distribution Voltage, Sheet No. 40

Rate GS-FL, Optional Unmetered General Service Rate for Small Fixed Loads,
Sheet No. 41-

Rate EH, Optional Rate for Electric Space Heating, Sheet No. 42

Rate DM, Secondary Distribution Service – Small, Sheet No. 43

Rate DP, Service at Primary Distribution Service, Sheet No. 44

Rate SFL-ADPL, Optional Unmetered Rate for Small Fixed Loads Attached
Directly to Company's Power Lines, Sheet No. 46

Rate RTP, Real Time Pricing Program, Sheet No. 90

The gas DSM rider is applicable to service provided under the following residential gas service tariffs:

Rate RS, Residential Service, Sheet No. 30

Rate RFT, Residential Firm Transportation Service, Sheet No. 33

Calculation of the Residential Charge

The proposed residential charge per kWh for 2006 was calculated by dividing the sum of: 1) the reconciliation amount calculated in Attachment E, page 1 of 5, and 2) the DSM Revenue Requirement associated with the DSM programs projected for calendar year 2006, by the projected sales for calendar year 2006. DSM Program Costs for 2006 include the total implementation costs plus program rebates, lost revenues, and shared savings. The calculations in support of the residential recovery mechanism are provided in Attachment E, page 5 of 5.

Calculation of the Non-Residential Charge

The proposed non-residential charge per kWh for 2006 was calculated by dividing the sum of: 1) the reconciliation amount calculated in Attachment E, page 1 of 5, and 2) the DSM Revenue Requirement associated with the DSM program projected for calendar year 2006, by the projected sales for calendar year 2006. DSM Program Cost for 2006 includes the total implementation costs plus program rebates, lost revenues and shared savings.

Allocation of the DSM Revenue Requirement

The DSM Cost Recovery Mechanism attributes the costs to be recovered to the respective class that benefits from the programs. The amounts associated with the reconciliation of the Rider are similarly allocated as demonstrated in Attachment D, page 2 of 5. The costs for the Power Manager program are fully allocated to the residential electric class, since this is the class directly benefiting from the implementation of the program. As required, qualifying industrial consumers are permitted to “opt-out” of participation in, and payment for, the DSM programs.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that a copy of the foregoing Application was sent by regular U.S. mail or overnight mail to all Interested Stakeholders listed below this 11th day of July, 2006.

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	Year			
	1	2	3	4
Residential Programs				
Residential Energy Assessments Revenues	\$ 501,781	\$ 1,026,379	\$ 1,577,884	\$ 2,177,091
Smart Saver® for Residential Customers Revenues	\$ 1,511,934	\$ 3,092,545	\$ 3,582,290	\$ 4,083,382
Low Income				
Low Income Services Agency Kits Revenues	\$ 571,891	\$ 1,122,657	\$ 1,527,283	\$ 1,916,081
Low Income Services				
Low Income Weatherization & Refrigerator Replacement Revenues	\$ 56,229	\$ 112,116	\$ 168,660	\$ 232,129
Energy Efficiency Education Program for Schools Revenues	\$ 529,924	\$ 1,320,137	\$ 2,518,624	\$ 4,363,082
Energy Star Construction Revenues	\$ 7,780	\$ 7,497	\$ 7,214	\$ 6,932
Total for Residential Conservation Programs Revenues	\$ 3,179,539	\$ 6,681,332	\$ 9,381,955	\$ 12,778,696
Advanced Power Manager Revenues	\$ 23,252	\$ 604,562	\$ 22,403,320	\$ 44,706,887
Power Manager Revenues	\$ 6,806,646	\$ 7,240,861	\$ 7,671,795	\$ 8,099,317
Total Residential Revenues	\$ 10,009,438	\$ 14,526,755	\$ 39,457,071	\$ 65,584,901
Non-Residential Programs				
Smart Saver® for Non-Residential Customers Lighting Revenues	\$ 694,746	\$ 1,443,445	\$ 2,139,629	\$ 2,908,473
Smart Saver® for Non-Residential Customers				

HVAC Revenues	\$ 1,047	\$ 2,186	\$ 4,239	\$ 6,416
Smart Saver® for Non-Residential Customers Motors Revenues	\$ 27,415	\$ 54,671	\$ 81,737	\$ 108,631
Smart Saver® for Non-Residential Customers Other Prescriptive Revenues	\$ 324,584	\$ 667,993	\$ 1,032,011	\$ 1,419,988
Smart Saver® for Non-Residential Customers Energy Star Food Service Products Revenues	\$ 9,852	\$ 20,647	\$ 32,394	\$ 45,134
Smart Saver® for Non-Residential Customers Custom Rebate Revenues	\$ 678,392	\$ 1,417,831	\$ 2,230,924	\$ 3,132,907
Total Conservation for Non-Residential Customers Revenues	\$ 1,736,036	\$ 3,606,773	\$ 5,520,935	\$ 7,621,550
Power Share® Revenues	\$ 23,439,744	\$ 24,640,409	\$ 25,045,462	\$ 24,652,110
Total Non-Residential Revenues	\$ 25,175,780	\$ 28,247,182	\$ 30,566,397	\$ 32,273,660
Total Residential and Non-Residential Revenues	\$ 35,185,218	\$ 42,773,937	\$ 70,023,468	\$ 97,858,561

Residential Programs	Year	1	2	3	4
Residential Energy Assessments		\$ 336,189	\$ 680,623	\$ 1,036,755	\$ 1,412,160
Smart Saver® for Residential Customers		\$ 1,017,403	\$ 2,043,641	\$ 2,296,681	\$ 2,551,596
Low Income					
Low Income Services Agency Kits		\$ 407,979	\$ 783,016	\$ 1,043,032	\$ 1,282,540
Low Income Services					
Low Income Weatherization & Refrigerator Replacement		\$ 9,269	\$ 27,673	\$ 57,261	\$ 104,075
Energy Efficiency Education Program for Schools		\$ 690,360	\$ 1,474,095	\$ 2,348,463	\$ 3,324,049
Total for Residential Conservation Programs		\$ 2,461,200	\$ 5,009,048	\$ 6,782,191	\$ 8,674,420
AMI					
Revenues		\$ 15,782	\$ 120,362	\$ 122,332	\$ 10,383,390
Power Manager					
Revenues		\$ 5,407,885	\$ 5,076,271	\$ 4,744,657	\$ 4,413,044
Total Residential		\$ 7,884,867	\$ 10,205,682	\$ 11,649,181	\$ 23,470,853
Non-Residential Programs					
Smart Saver® for Non-Residential Customers					
Lighting		\$ 460,031	\$ 938,980	\$ 1,382,423	\$ 1,866,759
Revenues		\$	\$	\$	\$

Smart Saver® for Non-Residential Customers	HVAC	Revenues	\$	16,361	\$	34,006	\$	53,149	\$	74,175	
Smart Saver® for Non-Residential Customers	Motors	Revenues	\$	7,637	\$	16,357	\$	25,094	\$	34,691	
Smart Saver® for Non-Residential Customers	Other Prescriptive	Revenues	\$	237,823	\$	501,301	\$	793,067	\$	1,119,099	
Smart Saver® for Non-Residential Customers	Energy Star Food Service Products	Revenues	\$	7,505	\$	19,326	\$	35,367	\$	54,979	
Smart Saver® for Non-Residential Customers	Smart Saver® for Non-Residential Customers	Custom Rebate	Revenues	\$	246,930	\$	510,179	\$	792,631	\$	1,100,333
Total Conservation for Non-Residential Customers		Revenues	\$	976,289	\$	2,020,148	\$	3,081,730	\$	4,250,036	
Power Share®		Revenues	\$	14,783,631	\$	18,246,002	\$	21,068,143	\$	19,863,455	
Total Non-Residential		Revenues	\$	15,759,920	\$	20,266,150	\$	24,149,873	\$	24,113,491	
Total Residential and Non-Residential		Revenues	\$	23,644,787	\$	30,471,832	\$	35,799,054	\$	47,584,344	

Cost-Effectiveness of Proposed Residential DSM Programs

	Option Value			<u>RIM</u>
	<u>UCT</u>	<u>UCT</u>	<u>TRC</u>	
<u>Residential - New Programs/Measures</u>				
Summer Saver (Air-conditioner)	1.80	1.55	8.48	0.85
Home Energy House Call	4.89	4.38	4.89	0.98
Ohio Energy Project (NEED)	1.78	1.61	19.54	0.65
Power Manager	1.56	1.81	2.05	1.56
Energy Star Products				
CFL's (Compact Fluorescent Lights)	12.55	11.26	12.55	1.04
Torchieres (Floor lamps)	7.38	6.62	5.26	0.98
Energy Efficiency Web Site (Electric Impacts)	6.18	5.55	23.83	0.96
Room AC Turn-In	1.67	1.44	3.19	0.78
AC Check - Pilot	3.75	3.23	16.26	1.08
Smart Saver Heat Pump with ECM	1.94	1.74	1.54	0.74
Personalized Energy Report Pilot Program	10.19	9.23	32.43	0.90
Pre-Paid Meter - Pilot	4.70	4.27	4.70	0.84
Energy Star Products - Gas Furnace /ECM (Elec Impacts)	5.52	5.08	2.46	0.77
House Call Plus - Research (Elec Heated Homes)	3.23	2.89	6.94	0.86
House Call Plus - Research (Gas Heated Homes)	2.54	2.33	5.48	0.70
Smart Saver - Energy Star Products - Gas Furnace	8.31	7.68	2.87	0.77
Smart Saver - Energy Star Products - Gas Furnace with ECM	5.52	5.08	2.46	0.77
Energy Efficiency Web Site (Gas Impacts)				

Residential DSM Program Summary

Residential - Current Programs/Measures	Projected Program Costs						Projected Net Lost Revenues						Projected 10% Shared Savings Before Subtracting Administrative and Marketing Costs					
	2006	2007	2008	2009	2010	2010	2006	2007	2008	2009	2010	2010	2006	2007	2008	2009	2010	
Summer Saver (Air-conditioner)	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 15,210	\$ 15,210	\$ 15,210	\$ 15,210	\$ 15,210	\$ 15,210	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	
Home Energy House Call	\$ 812,500	\$ 937,500	\$ 1,062,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 176,187	\$ 203,293	\$ 230,398	\$ 257,504	\$ 257,504	\$ 316,063	\$ 364,688	\$ 413,313	\$ 461,938	\$ 461,938	\$ 461,938	
Ohio Energy Project (NEED)	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 16,296	\$ 16,296	\$ 16,296	\$ 16,296	\$ 16,296	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	\$ 11,700	
Power Manager	\$ 1,055,743	\$ 3,338,012	\$ 3,617,970	\$ 4,251,461	\$ 4,339,625	\$ 4,339,625	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 58,122	\$ 166,929	\$ 202,606	\$ 238,082	\$ 243,019	\$ 243,019	
Energy Star Products	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,792,560	\$ 1,792,560	\$ 1,792,560	\$ 1,792,560	\$ 1,792,560	\$ 1,155,000	\$ 1,155,000	\$ 1,155,000	\$ 1,155,000	\$ 1,155,000	\$ 1,155,000	
CFL's (Compact Fluorescent Lights)	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 37,937	\$ 37,937	\$ 37,937	\$ 37,937	\$ 37,937	\$ 22,968	\$ 22,968	\$ 22,968	\$ 22,968	\$ 22,968	\$ 22,968	
Torchiere's (Floor lamps)	\$ 102,000	\$ 122,400	\$ 142,800	\$ 176,800	\$ 204,000	\$ 204,000	\$ 66,814	\$ 80,176	\$ 95,539	\$ 115,610	\$ 133,627	\$ 52,836	\$ 63,403	\$ 73,970	\$ 91,582	\$ 105,672	\$ 105,672	
Energy Efficiency Web Site (Electric Impacts)	\$ 50,000	\$ 75,000	\$ 100,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 9,506	\$ 14,259	\$ 19,012	\$ 23,765	\$ 23,765	\$ 3,350	\$ 5,025	\$ 6,700	\$ 8,375	\$ 8,375	\$ 8,375	
Room AC Turn-in	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 5,351	\$ 10,701	\$ 21,402	\$ 32,103	\$ 42,804	\$ 6,875	\$ 13,750	\$ 27,500	\$ 41,250	\$ 55,000	\$ 55,000	
AC Check - Pilot	\$ 35,000	\$ 52,500	\$ 70,000	\$ 70,000	\$ 70,000	\$ 70,000	\$ 5,008	\$ 7,512	\$ 10,017	\$ 10,017	\$ 10,017	\$ 3,290	\$ 4,935	\$ 6,580	\$ 6,580	\$ 6,580	\$ 6,580	
Smart Saver Heat Pump with ECM	\$ 1,078,176	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Personalized Energy Report Pilot Program	\$ 277,000	\$ 400,000	\$ 1,000,000	\$ 1,500,000	\$ 2,000,000	\$ 2,000,000	\$ 8,501	\$ 170,022	\$ 425,054	\$ 637,581	\$ 850,108	\$ 102,490	\$ 148,000	\$ 370,000	\$ 555,000	\$ 740,000	\$ 740,000	
Pre-Paid Meter - Pilot	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,968	\$ 25,161	\$ 31,451	\$ 41,935	\$ 41,935	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Energy Star Products - Gas Furnace/ECM (Elec Impacts)	\$ 23,500	\$ 49,000	\$ 76,725	\$ 142,450	\$ 197,175	\$ 197,175	\$ 1,277	\$ 5,106	\$ 12,765	\$ 25,530	\$ 38,286	\$ 5,241	\$ 10,927	\$ 17,110	\$ 31,766	\$ 43,970	\$ 43,970	
House Call Plus - Research (Elec Heated Homes)	\$ 94,000	\$ 196,000	\$ 306,900	\$ 569,800	\$ 788,700	\$ 788,700	\$ 419,227	\$ 503,072	\$ 628,841	\$ 838,454	\$ 838,454	\$ 1,096,500	\$ 1,315,800	\$ 1,644,750	\$ 2,193,000	\$ 2,193,000	\$ 2,193,000	
House Call Plus - Research (Gas Heated Homes)	\$ 1,500,000	\$ 1,800,000	\$ 2,250,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 419,227	\$ 503,072	\$ 628,841	\$ 838,454	\$ 838,454	\$ 124,300	\$ 148,160	\$ 186,450	\$ 248,600	\$ 248,600	\$ 248,600	
Smart Saver - Energy Star Products - Gas Furnace	\$ 275,000	\$ 330,000	\$ 412,500	\$ 550,000	\$ 550,000	\$ 550,000	\$ 41,923	\$ 50,307	\$ 62,884	\$ 83,845	\$ 83,845	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Smart Saver - Energy Star Products - Gas Furnace with EC	\$ 2,195,804	\$ 2,462,438	\$ 3,056,622	\$ 3,791,819	\$ 4,159,949	\$ 4,159,949	\$ 2,616,763	\$ 2,931,613	\$ 3,397,366	\$ 3,928,548	\$ 4,182,358	\$ 2,979,734	\$ 3,472,284	\$ 4,156,647	\$ 5,085,841	\$ 5,315,822	\$ 5,315,822	
Program Administrative and Marketing Costs	\$ 8,959,723	\$ 11,248,850	\$ 13,632,017	\$ 16,950,830	\$ 18,257,949	\$ 18,257,949	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Costs, Net Lost Revenues, Shared Savings	\$ 2,195,804	\$ 2,462,438	\$ 3,056,622	\$ 3,791,819	\$ 4,159,949	\$ 4,159,949	\$ 2,616,763	\$ 2,931,613	\$ 3,397,366	\$ 3,928,548	\$ 4,182,358	\$ 2,979,734	\$ 3,472,284	\$ 4,156,647	\$ 5,085,841	\$ 5,315,822	\$ 5,315,822	

Breakdown Between Electric and Gas

Residential - Current Programs/Measures	Electric			Gas			Total
	Costs	Lost Revenues	Shared Savings	Costs	Lost Revenues	Shared Savings	
Summer Saver (Air-conditioner)	\$ 250,000	\$ 15,210	\$ 13,250	\$ -	\$ -	\$ -	\$ 278,460
Home Energy House Call	\$ 812,500	\$ 176,187	\$ 312,313	\$ -	\$ -	\$ -	\$ 1,300,999
Ohio Energy Project (NEED)	\$ 150,000	\$ 16,296	\$ 10,200	\$ -	\$ -	\$ -	\$ 176,486
Power Manager	\$ 1,055,743	\$ -	\$ 59,122	\$ -	\$ -	\$ -	\$ 1,114,865
Energy Star Products	\$ 1,000,000	\$ 1,792,560	\$ 1,066,242	\$ -	\$ -	\$ -	\$ 3,858,802
CFL's (Compact Fluorescent Lights)	\$ 36,000	\$ 37,937	\$ 22,968	\$ -	\$ -	\$ -	\$ 96,905
Torchiere's (Floor lamps)	\$ 102,000	\$ 66,814	\$ 49,266	\$ -	\$ -	\$ -	\$ 218,080
Energy Efficiency Web Site (Electric Impacts)	\$ 50,000	\$ 9,506	\$ (2,150)	\$ -	\$ -	\$ -	\$ 57,356
Room AC Turn-in	\$ 25,000	\$ 5,351	\$ 6,125	\$ -	\$ -	\$ -	\$ 36,476
AC Check - Pilot	\$ 35,000	\$ 5,008	\$ (1,890)	\$ -	\$ -	\$ -	\$ 38,118
Smart Saver Heat Pump with ECM	\$ 1,078,176	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,078,176
Personalized Energy Report Pilot Program	\$ 277,000	\$ 8,501	\$ 101,490	\$ -	\$ -	\$ -	\$ 386,991
Pre-Paid Meter - Pilot	\$ -	\$ 20,968	\$ 4,941	\$ -	\$ -	\$ -	\$ 25,909
Energy Star Products - Gas Furnace/ECM (Elec Impacts)	\$ 23,500	\$ 1,277	\$ 4,941	\$ -	\$ -	\$ -	\$ 29,717
House Call Plus - Research (Elec Heated Homes)	\$ 94,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94,000
House Call Plus - Research (Gas Heated Homes)	\$ 1,500,000	\$ 419,227	\$ 525,750	\$ -	\$ -	\$ -	\$ 2,444,977
Smart Saver - Energy Star Products - Gas Furnace	\$ 275,000	\$ 41,923	\$ 58,025	\$ -	\$ -	\$ -	\$ 374,948
Smart Saver - Energy Star Products - Gas Furnace with EC	\$ 2,195,804	\$ -	\$ (48,072)	\$ -	\$ -	\$ -	\$ 2,147,731
Program Administrative and Marketing Costs	\$ 8,959,723	\$ 2,616,763	\$ 2,177,578	\$ -	\$ -	\$ -	\$ 13,754,064
Total Shared Savings Net of Other Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Costs, Net Lost Revenues, Shared Savings	\$ 2,195,804	\$ 2,616,763	\$ 2,177,578	\$ -	\$ -	\$ -	\$ 5,315,822

Projected Electric and Gas Load Impacts

Projected Participants	2007	2008	2009	2010	kwh	kwh	Projected kWh Impacts	Projected ccf Impacts	Projected kW Impacts	Projected kW Impacts	Total kWh or kW Impacts	Cumulative Annual Total	Total ccf Impacts	Cumulative Annual Total		
Residential - Current Programs/Measures	2008	2007	2008	2007	2008	2007	2009	2008	2007	2008	19,888	30,323	32,370	34,259	35,829	152,668
Summer Saver (Air-conditioner)	1,000	1,000	250	250	250	250	250	250	250	250	264,473,900	772,875,900	5,141,000	19,489,850	51,080,150	
Home Energy House Call	3,250	3,750	4,250	4,750	998	0.31	3,243,500	3,742,500	4,241,500	4,740,500	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Ohio Energy Project (NEED)	1,000	1,000	1,000	1,000	300	0.09	300,000	300,000	300,000	300,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Power Manager	2,000	12,000	12,000	12,000	12,000	1.38	-	-	-	-	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Energy Star Products	500,000	500,000	500,000	500,000	66	0.02	33,000,000	33,000,000	33,000,000	33,000,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
CFL's (Compact Fluorescent Lights)	1,800	1,800	1,800	1,800	388	0.12	698,400	698,400	698,400	698,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Torchieres (Floor lamps)	1,800	1,800	1,800	1,800	388	0.12	698,400	698,400	698,400	698,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Energy Efficiency Web Site (Electric Impacts)	6,000	7,200	8,400	10,400	205	0.06	1,230,000	1,476,000	1,722,000	2,132,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Room AC Turn-In	1,000	1,500	2,000	2,500	175	0.16	175,000	262,500	350,000	437,500	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
AC Check - Pilot	250	500	1,000	1,500	394	0.35	98,500	197,000	394,000	591,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Smart Saver Heat Pump with ECM	100	150	200	200	922	0.29	92,200	138,300	184,400	184,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Smart Saver Report Pilot Program	52,800	-	-	-	300	0.09	15,840,000	15,840,000	15,840,000	15,840,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Personalized Energy Report Pilot Program	100	150	200	200	922	0.29	92,200	138,300	184,400	184,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Pre-Paid Meter - Pilot	100	2,000	5,000	7,500	1,565	0.49	156,500	313,000	469,500	625,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Energy Star Products / ECM (Elec Impacts)	500	600	750	1,000	772	0.24	386,000	463,200	579,000	772,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
House Call Plus - Research (Elec Heated Homes)	5	20	50	100	4,700	1.48	23,500	94,000	235,000	470,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
House Call Plus - Research (Gas Heated Homes)	20	80	200	400	300	0.09	92,200	138,300	184,400	184,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Smart Saver - Energy Star Products - Gas Furnace	5,000	6,000	7,500	10,000	451	0.14	225,500	270,600	338,250	451,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Smart Saver - Energy Star Products - Gas Furnace with ECI	20	80	200	400	300	0.09	92,200	138,300	184,400	184,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
House Call Plus - Research (Gas Heated Homes)	500	600	750	1,000	451	0.14	225,500	270,600	338,250	451,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Smart Saver - Energy Star Products - Gas Furnace	20	80	200	400	300	0.09	92,200	138,300	184,400	184,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
House Call Plus - Research (Gas Heated Homes)	500	600	750	1,000	451	0.14	225,500	270,600	338,250	451,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Smart Saver - Energy Star Products - Gas Furnace	500	600	750	1,000	451	0.14	225,500	270,600	338,250	451,000	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	
Smart Saver - Energy Star Products - Gas Furnace with ECI	20	80	200	400	300	0.09	92,200	138,300	184,400	184,400	60,015,300	264,473,900	5,141,000	19,489,850	51,080,150	

Program/Measure	Projected Net Lost Revenues			
	2010	2009	2008	2007
Residential - Current Programs/Measures	280,000	280,000	280,000	280,000
Summer Saver (Air-conditioner)	280,000	280,000	280,000	280,000
Home Energy House Call	3,243,500	3,742,500	4,241,500	4,740,500
Ohio Energy Project (NEED)	300,000	300,000	300,000	300,000
Power Manager	-	-	-	-
Energy Star Products	33,000,000	33,000,000	33,000,000	33,000,000
CFL's (Compact Fluorescent Lights)	698,400	698,400	698,400	698,400
Torchiereas (Floor lamps)	698,400	698,400	698,400	698,400
Energy Efficiency Web Site (Electric Impacts)	1,230,000	1,476,000	1,722,000	2,132,000
Room AC Turn-In	175,000	262,500	350,000	437,500
AC Check - Pilot	98,500	197,000	394,000	591,000
Smart Saver Heat Pump with ECM	92,200	138,300	184,400	184,400
Personalized Energy Report Pilot Program	15,840,000	-	-	-
Pre-Paid Meter - Pilot	156,500	3,130,000	7,825,500	11,737,500
Energy Star Products - Gas Furnace/ECM (Elec Impacts)	386,000	463,200	579,000	772,000
House Call Plus - Research (Elec Heated Homes)	23,500	94,000	235,000	470,000
Projected cct Impacts	24,000	60,000	120,000	180,000
House Call Plus - Research (Gas Heated Homes)	6,000	24,000	60,000	120,000
Smart Saver - Energy Star Products - Gas Furnace	2,255,000	2,706,000	3,382,500	4,510,000
Smart Saver - Energy Star Products with ECM	225,500	270,600	338,250	451,000
Total kWh Impacts & Net Lost Revenues	55,523,600	43,781,900	49,809,300	55,343,300
Cumulative Annual Lost Revenues	2,486,500	3,000,600	3,780,750	5,081,000
Total cct Impacts & Net Lost Revenues	2,486,500	3,000,600	3,780,750	5,081,000
Cumulative Total Lost Revenues	37,680,475	37,680,475	922,300	922,300
Cumulative Total Lost Revenues	9,361,340	9,361,340	3,550,853	3,550,853

Program/Measure	Projected Net Lost Revenues			
	2010	2009	2008	2007
Residential - Current Programs/Measures	280,000	280,000	280,000	280,000
Summer Saver (Air-conditioner)	280,000	280,000	280,000	280,000
Home Energy House Call	3,243,500	3,742,500	4,241,500	4,740,500
Ohio Energy Project (NEED)	300,000	300,000	300,000	300,000
Power Manager	-	-	-	-
Energy Star Products	33,000,000	33,000,000	33,000,000	33,000,000
CFL's (Compact Fluorescent Lights)	698,400	698,400	698,400	698,400
Torchiereas (Floor lamps)	698,400	698,400	698,400	698,400
Energy Efficiency Web Site (Electric Impacts)	1,230,000	1,476,000	1,722,000	2,132,000
Room AC Turn-In	175,000	262,500	350,000	437,500
AC Check - Pilot	98,500	197,000	394,000	591,000
Smart Saver Heat Pump with ECM	92,200	138,300	184,400	184,400
Personalized Energy Report Pilot Program	15,840,000	-	-	-
Pre-Paid Meter - Pilot	156,500	3,130,000	7,825,500	11,737,500
Energy Star Products - Gas Furnace/ECM (Elec Impacts)	386,000	463,200	579,000	772,000
House Call Plus - Research (Elec Heated Homes)	23,500	94,000	235,000	470,000
Projected cct Impacts	24,000	60,000	120,000	180,000
House Call Plus - Research (Gas Heated Homes)	6,000	24,000	60,000	120,000
Smart Saver - Energy Star Products - Gas Furnace	2,255,000	2,706,000	3,382,500	4,510,000
Smart Saver - Energy Star Products with ECM	225,500	270,600	338,250	451,000
Total kWh Impacts & Net Lost Revenues	55,523,600	43,781,900	49,809,300	55,343,300
Cumulative Annual Lost Revenues	2,486,500	3,000,600	3,780,750	5,081,000
Total cct Impacts & Net Lost Revenues	2,486,500	3,000,600	3,780,750	5,081,000
Cumulative Total Lost Revenues	37,680,475	37,680,475	922,300	922,300
Cumulative Total Lost Revenues	9,361,340	9,361,340	3,550,853	3,550,853

Projected Net Lost Revenues

Net Lost Revenue Rate

Projected Net Lost Revenues

Projected Shared Savings

Residential - Current Programs/Measures	UCT	Projected Program Costs					Projected Program Savings				
		2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Summer Saver (Air-conditioner)	1.8	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
Home Energy House Call	4.89	\$ 812,500	\$ 937,500	\$ 1,062,500	\$ 1,187,500	\$ 1,187,500	\$ 3,160,625	\$ 3,646,875	\$ 4,133,125	\$ 4,619,375	\$ 4,619,375
Ohio Energy Project (NEED)	1.78	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 117,000	\$ 117,000	\$ 117,000	\$ 117,000	
Power Manager	1.56	\$ 1,055,743	\$ 3,338,012	\$ 3,617,970	\$ 4,251,461	\$ 4,339,625	\$ 591,216	\$ 1,869,287	\$ 2,026,063	\$ 2,380,818	\$ 2,430,190
Energy Star Products	12.55	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 11,550,000	\$ 11,550,000	\$ 11,550,000	\$ 11,550,000	
CFL's (Compact Fluorescent Lights)	7.38	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 229,680	\$ 229,680	\$ 229,680	\$ 229,680	
Torchiere's (Floor lamps)	6.18	\$ 102,000	\$ 122,400	\$ 142,800	\$ 176,800	\$ 204,000	\$ 528,360	\$ 634,032	\$ 739,704	\$ 915,824	
Energy Efficiency Web Site (Electric Impacts)	1.67	\$ 50,000	\$ 75,000	\$ 100,000	\$ 125,000	\$ 125,000	\$ 33,500	\$ 50,250	\$ 67,000	\$ 83,750	
Room AC Turn-In	3.75	\$ 25,000	\$ 50,000	\$ 100,000	\$ 150,000	\$ 200,000	\$ 68,750	\$ 137,500	\$ 275,000	\$ 412,500	
AC Check - Pilot	1.94	\$ 35,000	\$ 52,500	\$ 70,000	\$ 70,000	\$ 70,000	\$ 32,900	\$ 49,350	\$ 65,800	\$ 65,800	
Smart Saver Heat Pump with ECM	10.19	\$ 1,078,176	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Personalized Energy Report Pilot Program	4.7	\$ 277,000	\$ 400,000	\$ 1,000,000	\$ 1,500,000	\$ 2,000,000	\$ 1,024,900	\$ 1,480,000	\$ 3,700,000	\$ 5,550,000	
Pre-Paid Meter - Pilot	5.52	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Energy Star Products - Gas Furnace (ECM (Elec Impacts))	3.23	\$ 23,500	\$ 49,000	\$ 76,725	\$ 142,450	\$ 197,175	\$ 52,405	\$ 109,270	\$ 171,097	\$ 317,664	
House Call Plus - Research (Elec Heated Homes)	2.54	\$ 94,000	\$ 196,000	\$ 306,900	\$ 569,800	\$ 788,700	\$ -	\$ -	\$ -	\$ -	
House Call Plus - Research (Gas Heated Homes)	8.31	\$ 1,500,000	\$ 1,800,000	\$ 2,250,000	\$ 3,000,000	\$ 3,000,000	\$ 10,965,000	\$ 13,158,000	\$ 16,447,500	\$ 21,930,000	
Smart Saver - Energy Star Products - Gas Furnace	5.52	\$ 275,000	\$ 330,000	\$ 412,500	\$ 550,000	\$ 550,000	\$ 1,243,000	\$ 1,491,600	\$ 1,864,500	\$ 2,486,000	
Smart Saver - Energy Star Products - Gas Furnace with EC											

Total Measure Costs	\$ 6,763,919	\$ 8,786,412	\$ 10,575,395	\$ 13,159,011	\$ 14,098,000
Administrative and Marketing Costs	\$ 2,195,804	\$ 2,462,438	\$ 3,056,622	\$ 3,791,819	\$ 4,159,949
Total Program Costs	\$ 8,959,723	\$ 11,248,850	\$ 13,632,017	\$ 16,950,830	\$ 18,257,949
Total Program Savings Net of Measure Costs	\$ 29,797,336	\$ 34,722,844	\$ 41,586,469	\$ 50,858,411	\$ 53,158,215
Marketing & Administration Costs	\$ 2,195,804	\$ 2,462,438	\$ 3,056,622	\$ 3,791,819	\$ 4,159,949
Total Program Savings Net of All Costs	\$ 27,601,532	\$ 32,260,406	\$ 38,529,847	\$ 47,066,592	\$ 48,998,267
10% Shared Savings	\$ 2,760,153	\$ 3,226,041	\$ 3,852,985	\$ 4,706,659	\$ 4,899,827

Note: This includes gas savings.

RIDER DSM

DEMAND SIDE MANAGEMENT COST RECOVERY RIDER

APPLICABILITY

Applicable to service rendered under the provisions of Rates RS and RFT (residential class).

CHARGES

The monthly amount computed under each of the rate schedules to which this rider is applicable shall be increased or decreased by the DSM Charge at a rate per hundred cubic feet (CCF) of monthly consumption in accordance with the following formula:

$$\text{DSM Charge} = \text{PC} + \text{LR} + \text{PI} + \text{BA}$$

Where: **PC = DSM PROGRAM COST RECOVERY.** For each twelve month period, the PC shall include all expected costs for demand-side management programs which have been approved by a collaborative process. Such program costs shall include the cost of planning, developing, implementing, monitoring, and evaluating DSM programs. Program costs will be assigned for recovery purposes to the rate classes whose customers are directly participating in the program. In addition, all costs incurred by or on behalf of the collaborative process, including but not limited to costs for consultants, employees and administrative expenses, will be recovered through the PC. Administrative costs that are allocable to more than one rate class will be recovered from those classes and allocated by rate class on the basis of the estimated avoided pipeline capacity and commodity costs resulting from each program.

The PC shall be determined by dividing the cost of approved programs allocated or assigned to the residential class by the expected CCF throughput for the upcoming twelve-month period.

LR = LOST REVENUE FROM DECREASED THROUGHPUT RECOVERY. The applicable LR shall be computed by 1) multiplying the amount of CCF throughput that will be lost for each twelve-month period as a result of the implementation of the approved programs times the CCF throughput charge for the applicable rate schedule, less the variable cost included in the charge; and, 2) dividing that product by the expected CCF throughput for the upcoming twelve-month period. Recovery of revenues from decreased throughput calculated for a twelve-month period for non-residential rate classes shall be included in the LR for three years from the implementation of the DSM measures or until terminated by the implementation of new rates pursuant to a general rate case, whichever comes first. Revenues from such decreased throughput will be assigned for recovery purposes to the rate classes whose programs resulted in the decreased throughput.

Issued pursuant to an Entry dated _____ in Case No. _____ before the Public Utilities Commission of Ohio.

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Issued by Sandra P. Meyer, President

CHARGES (Contd.)

PI = DSM PROGRAM INCENTIVE RECOVERY. The DSM Program Incentive (PI) amount shall be computed by multiplying the net resource savings expected from the approved programs which are to be installed during the upcoming twelve-month period times ten (10) percent. Net resource savings are defined as program benefits less the cost of the program, where program benefits will be calculated on the basis of the present value of Duke Energy Ohio's avoided gas costs over the expected life of the program, and will include both capacity and commodity savings. The DSM incentive amount related to programs shall be divided by the expected CCF throughput for the upcoming twelve-month period to determine the PI. DSM incentive amounts will be assigned for recovery purposes to the rate classes whose programs created the incentive.

BA = DSM BALANCE ADJUSTMENT. The BA is used to reconcile the difference between the amount of revenues actually billed through the respective DSM Charge components; namely, the PC, LR, and PI and previous BA, and the revenues which should have been billed, as follows:

- (1) For the PC, the balance adjustment amount will equal the difference between the amount billed in a twelve-month period from the application of the PC unit charge and the actual cost of the approved programs during the same twelve-month period.
- (2) For the LR, the balance adjustment amount will equal the difference between the amount billed during the twelve-month period from the application of the LR unit charge and the LR amount established for the same twelve-month period.
- (3) For the PI, the balance adjustment amount will equal the difference between the amount billed during the twelve-month period from application of the PI unit charge and the incentive amount determined for the actual DSM program, or measures implemented during the twelve-month period.
- (4) For the BA, the balance adjustment amount will equal the difference between the amount billed during the twelve-month period from application of the BA and the balance adjustment amount established for the same twelve-month period.

The balance adjustment amounts determined above shall include interest. The interest applied to the monthly amounts, shall be calculated at a rate equal to the average of the "3-month Commercial Paper Rate" for the immediately preceding 12-month period. The total of balance adjustment amounts shall be divided by the expected CCF throughput for the upcoming twelve-month period to determine the BA. DSM balance adjustment amounts will be assigned for recovery purposes to the rate classes to which over or under-recoveries of DSM amounts were realized.

All costs recovered through the DSM Charge will be assigned or allocated to Duke Energy Ohio's electric or gas customers on the basis of the estimated net electric or gas resource savings resulting from each program.

Issued pursuant to an Entry dated _____ in Case No. _____ before the Public Utilities Commission of Ohio.

Issued:

Effective:

Issued by Sandra P. Meyer, President

CHARGES (Contd.)

DSM CHARGE FILINGS

The filing of modifications to the DSM Charge shall be made at least thirty days prior to the beginning of the effective period for billing. Each filing will include the following information as needed:

- (1) A detailed description of each DSM program developed by the collaborative process, the total cost of each program over the twelve-month period, an analysis of expected resource savings, information concerning the specific DSM or efficiency measures to be installed, and any applicable studies which have been performed, as available.
- (2) A statement setting forth the detailed calculation of each component of the DSM Charge.

Each change in the DSM Charge shall be applied to customers' bills with the first billing cycle of the revenue month which coincides with, or is subsequent to, the effective date of such change.

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Public Utilities Commission of Ohio, and to Company's Service Regulations currently in effect, as filed with the Public Utilities Commission of Ohio, as provided by law.

Issued pursuant to an Entry dated _____ in Case No. _____ before the Public Utilities Commission of Ohio.

Issued:

Effective:

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RIDER DSM

DEMAND SIDE MANAGEMENT COST RECOVERY RIDER

APPLICABILITY

Applicable to service rendered under the provisions of Rates RS and ORH (residential class), and Rates DS, DM, DP, EH, GS-FL, and CUR (non-residential class) following the end of the Market Development Period.

CHARGES

The monthly amount computed under each of the rate schedules to which this rider is applicable shall be increased or decreased by the DSM Charge at a rate per kilowatt-hour of monthly consumption and, where applicable, a rate per kilowatt of monthly billing demand, in accordance with the following formula:

$$\text{DSM Charge} = \text{PC} + \text{LR} + \text{PI} + \text{BA}$$

Where: **PC = DSM PROGRAM COST RECOVERY.** For each twelve month period, the PC shall include all expected costs for demand-side management programs which have been approved by a collaborative process. Such program costs shall include the cost of planning, developing, implementing, monitoring, and evaluating DSM programs. Program costs will be assigned for recovery purposes to the rate classes whose customers are directly participating in the program. In addition, all costs incurred by or on behalf of the collaborative process, including but not limited to costs for consultants, employees and administrative expenses, will be recovered through the PC. Administrative costs that are allocable to more than one rate class will be recovered from those classes and allocated by rate class on the basis of the estimated avoided capacity and energy costs resulting from each program.

The PC applicable to each rate class shall be determined by dividing the cost of approved programs allocated or assigned to that class by the expected kilowatt-hour sales for the upcoming twelve-month period.

LR = LOST REVENUE FROM LOST SALES RECOVERY. The applicable LR shall be computed by 1) multiplying the amount of kilowatt-hour sales that will be lost for each twelve-month period as a result of the implementation of the approved programs times the energy charge for the applicable rate schedule, less the variable cost included in the charge, and, 2) dividing that product by the expected kilowatt-hour sales for the upcoming twelve-month period. Recovery of revenues from lost sales calculated for a twelve-month period for each rate class shall be included in the LR for three years from the implementation of the DSM measures or until terminated by the implementation of new rates pursuant to a general rate case, whichever comes first. Revenues from lost sales will be assigned for recovery purposes to the rate classes whose programs resulted in the lost sales.

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Issued:

Issued by Sandra P. Meyer, President

Effective:

CHARGES (Contd.)

PI = DSM PROGRAM INCENTIVE RECOVERY. The DSM Program Incentive (PI) amount shall be computed by multiplying the net resource savings expected from the approved programs which are to be installed during the upcoming twelve-month period times ten (10) percent. Net resource savings are defined as program benefits less the cost of the program, where program benefits will be calculated on the basis of the present value of Duke Energy Ohio's avoided costs over the expected life of the program, and will include both capacity and energy savings. The DSM incentive amount related to programs for each rate class shall be divided by the expected kilowatt-hour sales for the upcoming twelve-month period to determine the PI for that rate class. DSM incentive amounts will be assigned for recovery purposes to the rate classes whose programs created the incentive.

BA = DSM BALANCE ADJUSTMENT. The BA is used to reconcile the difference between the amount of revenues actually billed through the respective DSM Charge components; namely, the PC, LR, and PI and previous application of the BA and the revenues which should have been billed, as follows:

- (1) For the PC, the balance adjustment amount will be the difference between the amount billed in a twelve-month period from the application of the PC unit charge and the actual cost of the approved programs during the same twelve-month period.
- (2) For the LR, the balance adjustment amount will be the difference between the amount billed during the twelve-month period from the application of the LR unit charge and the LR amount established for the same twelve-month period.
- (3) For the PI, the balance adjustment amount will be the difference between the amount billed during the twelve-month period from application of the PI unit charge and the incentive amount determined for the actual DSM program, or measures implemented during the twelve-month period.
- (4) For the BA, the balance adjustment amount will be the difference between the amount billed during the twelve-month period from application of the BA and the balance adjustment amount established for the same twelve-month period.

The balance adjustment amounts determined above shall include interest. The interest applied to the monthly amounts, shall be calculated at a rate equal to the average of the "3-month Commercial Paper Rate" for the immediately preceding 12-month period. The total of the energy-related balance adjustment amounts shall be divided by the expected kilowatt-hour sales for the upcoming twelve-month period to determine the energy-related BA. DSM balance adjustment amounts will be assigned for recovery purposes to the rate classes to which over or under-recoveries of DSM amounts were realized.

All costs recovered through the DSM Charge will be assigned or allocated to Duke Energy Ohio's electric customers on the basis of the estimated net electric resource savings resulting from each program.

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Issued:

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Effective:

CHARGES (Contd.)

DSM CHARGE FILINGS

The filing of modifications to the DSM Charge shall be made at least thirty days prior to the beginning of the effective period for billing. Each filing will include the following information as needed:

- (1) A detailed description of each DSM program developed by the collaborative process, the total cost of each program over the twelve-month period, an analysis of expected resource savings, information concerning the specific DSM or efficiency measures to be installed, and any applicable studies which have been performed, as available.
- (2) A statement setting forth the detailed calculation of each component of the DSM Charge.

Each change in the DSM Charge shall be applied to customers' bills with the first billing cycle of the revenue month which coincides with, or is subsequent to, the effective date of such change.

DEMAND RATCHETS

Customers served under the provisions of Rate DS or Rate DP may be eligible to have their billing demand re-determined in recognition of a permanent change in load due to the installation of load control equipment or other measures taken by the customer to permanently reduce the customer's demand.

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Public Utilities Commission of Ohio, and to Company's Service Regulations currently in effect, as filed with the Public Utilities Commission of Ohio, as provided by law.

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Appendix E
Duke Energy Ohio DSM Rider

Comparison of Revenue Requirement to Rider Recovery

	(1) Projected Program Costs 7/2004 to 6/2005 (A)	(2) Projected Lost Revenues 7/2004 to 6/2005 (A)	(3) Projected Shared Savings 7/2004 to 6/2005 (A)	(4) Program Expenditures 7/04 through 6/05 (B)	(5) Gas	(6) Electric	(7) Lost Revenues 7/04 through 6/05 (B)	(8) Shared Savings 7/04 through 6/05 (B)	(9) 2004 Reconciliation Gas (D)	(10) Reconciliation Electric (E)	(11) Rider Collection (F) Electric	(12) Rider Collection (F) Electric	(13) (Over)/Under Gas (G)	(14) (Over)/Under Electric (H)
Residential Programs														
Summer Saver (Air-conditioner)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Home Energy News Call	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Residential Comprehensive Energy Education (NEED)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Power Meters	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Energy Star Products	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
CFL (Compact Fluorescent Lights)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Refrigerators (Floor lamps)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Dishwashers	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Washing Machines	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Energy Efficiency Web Site	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Free A/C Turn-In	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
A/C Check - Pilot	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Smart Saver Heat Pump with ECM	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Pre-Paid Meter - Pilot	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Energy Star Products - Gas Furnace (Elec. impacts)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Energy Star Products (Elec. Heated Homes)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
House Call Plus - Research (Gas Heated Homes)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
House Call Plus - Research (Gas Heated Homes)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Smart Saver - Energy Star Products - Gas Furnace	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Smart Saver - Energy Star Products - Gas Furnace with ECM	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Total	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$

There are no values for this page since it is the initial year of the program.

- (A) Amounts identified in a prior reconciliation filing. There are no values for this page since it is the initial year of the program.
- (B) Actual program expenditures, lost revenues, and shared savings for the period.
- (C) Allocation of program expenditures to gas and electric. Uses 62.9% gas based upon saturation of gas space heating.
- (D) Recovery allowed in accordance with a Commission Order.
- (E) Recovery allowed through the DSM Rider between July 1, 2004 and June 30, 2005.
- (F) Revenues collected through the DSM Rider between July 1, 2004 and June 30, 2005.
- (G) Column (3) + Column (9) - Column (11).
- (H) Column (6) + Column (7) + Column (8) - Column (10) - Column (12).

	(1) Projected Program Costs 7/2004 to 6/2005 (A)	(2) Projected Lost Revenues 7/2004 to 6/2005 (A)	(3) Projected Shared Savings 7/2004 to 6/2005 (A)	(4) Program Expenditures 7/04 through 6/05 (B)	(5) Gas	(6) Electric	(7) Lost Revenues 7/04 through 6/05 (B)	(8) Shared Savings 7/04 through 6/05 (B)	(9) 2004 Reconciliation Gas (D)	(10) Reconciliation Electric (E)	(11) Rider Collection (F) Electric	(12) Rider Collection (F) Electric	(13) (Over)/Under Gas (G)	(14) (Over)/Under Electric (H)
Commercial Programs														
High Efficiency Program	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Lighting	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
HVACs	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Other	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Photovoltaic Program														
Total	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$

- (A) Amounts identified in a prior reconciliation filing.
- (B) Actual program expenditures, lost revenues, and shared savings for the period.
- (C) Recovery allowed in accordance with a Commission Order.
- (D) Revenues collected through the DSM Rider between July 1, 2004 and June 30, 2005.
- (E) Column (4) + Column (5) + Column (6) - Column (7) - Column (8)

Duke Energy Ohio
Demand Side Management Cost Recovery Rider (DSMR)
Summary of Calculations for 2006 Programs

January, 2006 through December, 2006

	Program Costs (A)
<u>Electric Rider DSM</u>	
Residential Rate RS	\$ 10,401,639
Distribution Level Rates DS, DP, DT, GS-FL, EH & SP	\$ 4,415,781
<u>Gas Rider DSM</u>	
Residential Rate RS	\$ 3,352,425

(A) See Appendix E, page 2 of 5.

Duke Energy Ohio
Demand Side Management Cost Recovery Rider (DSMR)
Summary of Billing Determinants

Year 2006

Projected Annual Electric Sales MWH

Rates RS 7,554,428

Rates DS, DP, DT,
GS-FL, EH, & SP 10,588,967

Projected Annual Gas Sales MCF

Rate RS 40,912,180

Duke Energy Ohio
 Demand Side Management Cost Recovery Rider (DSMR)
 Summary of Calculations
 January, 2006 through December, 2006

Rate Schedule	True-Up Amount (A)	Expected Program Costs (B)	Total DSM Revenue Requirements	Estimated Billing Determinants (C)	DSM Cost Recovery Rider (DSMR)
Electric Rider DSM Residential Rate RS	\$ -	#####	\$ 10,401,639	7,554,428 mWh	\$ 0.001377 \$/kWh
Distribution Level Rates DS, DP, DT, GS-FL, EH & SP	\$ -	\$ 4,415,781	\$ 4,415,781	10,588,967 mWh	\$ 0.000417 \$/kWh
Gas Rider DSM Residential Rate RS	\$ -	\$ 3,352,425	\$ 3,352,425	40,912,180 MCF	\$ 0.081942 \$/MCF
Total Recovery			\$ 18,169,845		

(A) (Over)/Under of Appendix D page 1 multiplied by 1.0237 for 2005 for the average three-month commercial paper rate to include interest on over or under-recovery.
 (B) Appendix D, page 2.
 (C) Appendix D, page 4.

Duke Energy Ohio
139 East Fourth Street
Cincinnati, Ohio 45202

P.U.C.O. Gas No. 18
Sheet No. 86
Page 1 of 1

RIDER DSMR

(N)

DEMAND SIDE MANAGEMENT RATE

The Demand Side Management Rate (DSMR) shall be determined in accordance with the provisions of Rider DSM, Demand Side Management Cost Recovery Rider, Sheet No. 61 of this Tariff.

The DSMR to be applied to residential customer bills beginning with the April 2006 revenue month is \$0.0081942 per hundred cubic feet.

The DSMR to be applied to non-residential service customer bills beginning with the February 2006 revenue month is 0.00 cents per hundred cubic feet.

Issued by authority of an Order by the Public Utilities Commission of Ohio, dated _____ in Case No. _____

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Duke Energy Ohio
139 East Fourth Street
Cincinnati, Ohio 45202

P.U.C.O. Electric No. 19
Sheet No. 52.3
Page 1 of 1

RIDER DSMR

(N)

DEMAND SIDE MANAGEMENT RATE

The Demand Side Management Rate (DSMR) shall be determined in accordance with the provisions of Rider DSM, Demand Side Management Cost Recovery Rider, Sheet No. 97 of this Tariff.

The DSMR to be applied to residential customer bills beginning with the April 2006 revenue month is \$0.001377 per kilowatt-hour.

The DSMR to be applied to non-residential service customer bills beginning with the April 2006 revenue month is for distribution service is \$0.000417 per kilowatt-hour, and \$0.00000 per kilowatt-hours for transmission service.

Issued by authority of an Order by the Public Utilities Commission of Ohio, dated _____ in Case No. _____

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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2007-358-E

In re:)	
Application of Duke Energy Carolinas, LLC)	TESTIMONY OF
For Approval of Energy Efficiency Plan)	THEODORE E. SCHULTZ FOR
Including an Energy Efficiency Rider and)	DUKE ENERGY CAROLINAS
Portfolio of Energy Efficiency Programs)	
)	

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, ADDRESS, AND POSITION WITH DUKE ENERGY.

A. My name is Theodore E. Schultz, and my business address is 526 South Church Street, Charlotte, North Carolina. I am Vice President – Energy Efficiency for Duke Energy Corporation the parent of Duke Energy Carolinas, LLC (“Duke Energy Carolinas” or the “Company”) and am responsible for leading energy efficiency¹ initiatives across all retail markets served by Duke Energy, including Duke Energy Carolinas’ service territory. I am also responsible for Duke Energy’s customer strategy and the development and implementation of new products and services for the retail market.

Q. PLEASE STATE BRIEFLY YOUR EDUCATION, BACKGROUND AND PROFESSIONAL AFFILIATIONS.

A. I graduated from Syracuse University in 1987 with a Master’s Degree in Business Administration. I also earned a Bachelor of Science Degree in Business Administration from Albany University in Albany, New York.

Q. PLEASE DESCRIBE YOUR BUSINESS BACKGROUND AND EXPERIENCE.

A. Prior to joining Duke Energy, I worked for Energy East (New York State Electric and Gas) from 1983 to 1997. While at Energy East, I was promoted to various positions of increasing responsibility in the areas of planning and information

¹ The term “energy efficiency,” as used in this testimony, includes both energy efficiency/conservation and demand response measures.

1 technology, and was director of information technology when I left to join Duke
2 Energy. I joined Duke Energy in 1997 as manager of strategic business
3 development and became a director in our eBusiness area in 1999. In 2002, I
4 joined Duke Power's customer sales, service and marketing group becoming Vice
5 President – Marketing in 2003 and Vice President – Large Business Customers in
6 2004. Following the merger with Cinergy in 2006, I was named Vice President –
7 Customer Strategy and Planning before being named to my current position in
8 October 2006.

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A. The purpose of my testimony is to: (1) provide a brief historical overview of Duke
11 Energy Carolinas' demand side management ("DSM") and energy efficiency
12 programs; (2) review the challenges associated with achieving energy efficiency;
13 (3) describe how the Company's "save-a-watt" approach to energy efficiency
14 contained in the Application of Duke Energy Carolinas, LLC for Approval of
15 Energy Efficiency Plan Including and Energy Efficiency Rider and Portfolio of
16 Energy Efficiency Programs (the "Application") provides significantly more
17 value to customers than traditional energy efficiency programs; (4) explain how
18 the Company developed its portfolio of energy efficiency programs; (4) provide a
19 general description of the energy efficiency programs proposed in the Company's
20 Application; (5) identify the existing energy efficiency programs the Company
21 seeks to cancel and replace with new, improved energy efficiency programs; (6)
22 discuss the Company's plans for developing future programs; (7) provide an
23 estimate of the capacity and energy savings the Company expects the Energy

1 Efficiency Plan to create, as well as the projected customer savings; and (8)
2 discuss why the Company's Energy Efficiency Plan is in the public interest.

3 **II. HISTORICAL ENERGY EFFICIENCY PROGRAMS**

4 **Q. HOW HAS DUKE ENERGY CAROLINAS HISTORICALLY PURSUED**
5 **ENERGY EFFICIENCY AND CONSERVATION?**

6 A. Duke Energy Carolinas has a long history of promoting energy efficiency. The
7 Company implemented the first non-residential and residential DSM programs
8 almost 30 years ago. Rider IS (non-residential interruptible service), Rider SG
9 (non-residential standby generator control), and Rider LC (residential load
10 control) have been an important component of Duke Energy Carolinas' resource
11 mix for over 20 years and have remained virtually unchanged.

12 In the early 1990s, Duke Energy Carolinas also implemented a number of
13 energy efficiency programs. However, during the mid-90s, in the face of
14 adequate base load generation and the prospect of retail competition, Duke
15 Energy Carolinas, along with many other utilities across the region, phased out
16 many of its energy efficiency programs. Today, rising customer demand, rising
17 energy costs, and increased environmental concerns coupled with utilities' need
18 for new base load generation, has lead to renewed interest in all types of energy
19 efficiency programs. In particular, Global Climate Change and coal-fired
20 generation concerns demand that a new approach to energy efficiency be
21 developed.

22 **Q. WHAT ARE DUKE ENERGY CAROLINAS' CURRENT ENERGY**
23 **EFFICIENCY PROGRAMS?**

1 A. Duke Energy Carolinas' current energy efficiency programs are:

- 2 • Residential Energy Star[®] rate
- 3 • Existing Residential Housing Program
- 4 • Energy Efficiency Video for Residential Customers
- 5 • Large Business Customer Energy Efficiency Assessments
- 6 • Large Business Customer Energy Efficiency Tools
- 7 • Educational Web Resources
- 8 • On-line Home Energy Audit

9
10 **Q. WHAT ARE THE CHALLENGES THAT HAVE LIMITED ADOPTION**
11 **OF ADDITIONAL ENERGY EFFICIENCY PROGRAMS UNDER THE**
12 **CURRENT REGULATORY MODEL?**

13 A. Many reports indicate that it should be cost-effective for consumers to
14 aggressively pursue energy efficiency on their own, but this is clearly not
15 happening. The Market Potential Study conducted by Duke Energy Carolinas
16 identified more than 800,000,000 kWhs of energy efficiency potential. The
17 Market Potential Study is described in more detail in Company Witness Stevie's
18 testimony.

19 Duke Energy Carolinas conducted customer research to determine why
20 our customers were not taking advantage of existing energy efficiency
21 opportunities. Our research identified the following impediments:

- 22 • Most customers do not have the data, time or desire to evaluate efficiency
23 options. A customer quote from one of our focus groups summarizes this
24 position, "Energy works for me, I don't work for energy." Energy
25 generally is perceived by customers to be an abundant, low-cost, readily
26 available commodity. The cost of energy is a small portion of most
27 household and business budgets. In addition, other lifestyle or competitive

1 issues typically take priority over customers' considerations to conserve
2 energy. Instead, many customers believe they already have adopted
3 simple, responsible behaviors, and they perceive energy efficiency
4 alternatives as higher-priced, complicated, or unwelcome interferences
5 with their lifestyle or business.

6 • Many customers lack the capital to invest in energy efficiency. This leads
7 to decisions based on a lower initial capital cost or prolonging a
8 replacement decision as long as possible.

9 • Research shows most customers are not aware of the positive impact their
10 individual behaviors can have on the welfare of others on such issues as
11 climate change or national energy independence. There are signs of an
12 emerging social consciousness with regard to energy, but few customers
13 are currently willing to pay more to participate.

14 These challenges serve to limit customer participation in energy efficiency
15 programs, regardless of who develops, markets, or administers the programs. If
16 we are to achieve widespread adoption of all cost-effective energy efficiency,
17 these challenges must be addressed.

18 **Q. DID THE COMPANY'S RESEARCH IDENTIFY ANY OPPORTUNITIES**
19 **TO OVERCOME THESE CHALLENGES?**

20 A. Yes. Customers in our focus groups voiced a willingness to act when there is
21 clear leadership and a compelling value proposition for them. We have identified
22 the following customer prerequisites for participation:

23 • Productivity and/or lifestyle cannot be compromised

- 1 • Minimal up front investment
- 2 • Quick and material pay-off
- 3 • Problem-free solution that is simple to understand, easy to act upon,
- 4 convenient - one step solution and can be fulfilled immediately

5 Customers also viewed energy efficiency as an important aspect of their
6 relationship with Duke Energy. They view Duke Energy as a trusted partner and
7 advisor for electricity-related advice and programs. This is consistent with
8 national customer satisfaction benchmark studies conducted by J. D. Power and
9 Associates for the utility industry. J. D. Power's research suggests that having the
10 ability to better manage energy costs is an important attribute of customer
11 satisfaction. In fact, energy efficiency efforts impact almost a third of the
12 Company's overall residential customer satisfaction results, demonstrating the
13 importance customers place on it relative to their utility relationship.

14 **III. THE SAVE-A-WATT APPROACH**

15 **Q. PLEASE DESCRIBE THE COMPANY'S SAVE-A-WATT APPROACH.**

16 A. While simple in concept, the Company's proposed save-a-watt approach to
17 energy efficiency fundamentally changes both the way energy efficiency is
18 perceived and the role of the Company in achieving such energy efficiency. The
19 goal of the Company's new energy efficiency approach is to achieve all cost-
20 effective reductions in electricity in a way that enhances customer satisfaction and
21 ensures the utility is financially whole relative to the generation alternative.

22 Initially, the Company proposes to focus on offering customers programs
23 that will help them address rising energy prices in the near term. These offers are

1 being developed with direct input from Duke Energy Carolinas' customers and
2 will use new channels that are more convenient for customers and that also
3 provide value from the customers' perspective. Ultimately, as part of its Energy
4 Efficiency Plan, the Company intends to build energy efficiency into its standard
5 service offerings to make it part of the customer's everyday life without having to
6 sacrifice the comfort and convenience of electricity use.

7 **Q. HOW DOES THE COMPANY PROPOSE TO BE COMPENSATED FOR**
8 **ENERGY EFFICIENCY RESULTS UNDER SAVE-A-WATT?**

9 A. In addition to developing new programs that the Company believes will be more
10 effective in reducing energy consumption and demand, Duke Energy Carolinas is
11 proposing a different approach to the regulatory treatment of these programs. To
12 compensate and encourage the Company to become a leader in producing
13 capacity and energy by "saving" watts, Duke Energy Carolinas requests that it be
14 compensated through the amortization of and a return on 90% of the costs
15 avoided by saving watts. Not only will this produce savings for customers, but
16 customers will pay only for capacity and energy savings actually realized by
17 customers. In other words, customers will not pay for energy savings that the
18 Company does not achieve. From this revenue stream, the Company must pay for
19 marketing, administration, program incentives and measurement and verification
20 costs.

21 **Q. HOW WILL THE COSTS OF THE COMPANY'S ENERGY EFFICIENCY**
22 **PROGRAMS BE ALLOCATED?**

1 A. The Company has proposed that residential customers pay for residential
2 programs and non-residential customers pay for non-residential programs.

3 **Q. WHAT ARE THE DIFFERENCES BETWEEN SAVE-A-WATT AND**
4 **OTHER REGULATORY MODELS FOR ENERGY EFFICIENCY?**

5 A. The single biggest difference between save-a-watt and other regulatory models for
6 energy efficiency is that the utility only gets paid for the energy efficiency results
7 it delivers, *i.e.*, the energy efficiency impacts (kWh and kW) realized by
8 customers as verified by an independent party. Customers never pay for
9 resources that are not delivered and those that are delivered are more reliable
10 resources in the Integrated Resource Planning (“IRP”) process.

11 Most approaches to energy efficiency pay utilities, or other administrators,
12 for their marketing, administration, program incentives and measurement and
13 verification expenses regardless of the energy efficiency impacts they achieve.
14 As a result, the risk of not achieving the energy efficiency impacts and the risk of
15 achieving them at a higher unit cost than planned are assumed by the customer.
16 In contrast, the save-a-watt regulatory model shifts this burden to the utility.

17 Some regulatory approaches have introduced penalties for not meeting
18 minimum achievement levels in order to shift risk to the utility. A much simpler
19 approach is to simply pay utilities for energy efficiency impacts realized by
20 customers and verified by an independent party. The external verification helps
21 ensure the utility is producing quality resources that it can depend on to meet
22 customer demand, even as this demand continues to grow.

1 Another important difference in the save-a-watt approach is that it treats
2 energy efficiency just like supply-side resources. In other words, if the energy
3 efficiency resource produces results over a 10-year useful life, the utility is paid
4 for the results over the 10-year period. This requires the utility to be accountable
5 for the results over the resource's useful life in a manner similar to supply-side
6 resources.

7 **Q. ARE THERE ANY OTHER DIFFERENCES BETWEEN SAVE-A-WATT**
8 **AND OTHER ENERGY EFFICIENCY APPROACHES?**

9 A. There is one other significant difference. Past experience has shown traditional
10 energy efficiency approaches do not provide the needed flexibility to quickly
11 adjust product offerings, incentives, and marketing focus as customer needs,
12 markets, and technologies change. Customers should not be turned away from
13 participating in an energy efficiency program based on pre-set limits to program
14 funding and participation if we are truly focused on delivering all cost-effective
15 energy efficiency results.

16 **Q. HOW DOES SAVE-A-WATT CREATE VALUE FOR CUSTOMERS?**

17 A. In order to realize strong gains in energy efficiency program participation, Duke
18 Energy Carolinas believes it must focus on providing value to customers.
19 Continuing to develop and deliver energy efficiency programs as the Company
20 has done in the past will likely result in future energy efficiency program
21 participation and watts saved that is far below the potential identified in the
22 Market Potential Study. The objective of the save-a-watt approach is to create

1 value for customers and an incentive for the utility to achieve all cost-effective
2 energy efficiency.

3 The save-a-watt concept of getting paid based solely on results delivered
4 encourages utilities to create real value for customers and get rewarded for the
5 value delivered. It requires a deep understanding of customers' needs and price
6 sensitivity to deliver energy efficiency programs that customers will value.²
7 Because the utility is paid based on verified watts saved, the save-a-watt
8 regulatory model provides the necessary incentive to the utility to produce quality
9 energy efficiency programs that can be incorporated as a reliable resource in the
10 utility's IRP.

11 However, the Company believes certain types of energy efficiency
12 impacts are not reliable enough to be considered in the IRP. For example, turning
13 back a thermostat is an easy way to conserve energy, but is not a customer action
14 the Company can depend upon. For this reason, the Company's Energy
15 Efficiency Plan does not include these types of energy efficiency programs;
16 however, the Company will continue to provide education on ways customers can
17 conserve energy.

18 **Q. ARE UTILITIES UNIQUELY POSITIONED TO PURSUE AND ACHIEVE**
19 **ENERGY EFFICIENCY?**

20 A. Yes. Duke Energy Carolinas believes utilities have the expertise, infrastructure,
21 and customer relationships to be leaders in delivering cost-effective energy
22 efficiency. Further, as I stated earlier, customers see energy efficiency as an

² The requirement to develop a keen understanding of customer behavior and preferences will make marketing, *i.e.*, customer research and analysis, a more significant cost for the Company under the save-a-watt approach.

1 important part of the services provided by Duke Energy Carolinas and expect the
2 Company to take the lead in providing this service.

3 **Q. WHAT IS THE COMPANY SEEKING THE COMMISSION TO**
4 **APPROVE?**

5 A. Duke Energy Carolinas requests that the Commission approve the energy
6 efficiency rider (“Rider EE (SC)” of the “Rider”) set forth as Exhibit No. 1 to Mr.
7 Farmer’s testimony, which will compensate the Company for delivering verified
8 energy efficiency results. In particular, the Company seeks approval for the first
9 year Rider EE (SC) charge (including the appropriate revenue related taxes) of
10 \$0.001233 per kWh for residential customers and \$0.001019 per kWh for non-
11 residential customers. Under the Company’s Energy Efficiency Plan, the
12 Commission will adjust Rider EE (SC) annually, based on updated projections of
13 results, including projected incremental avoided costs, and actual results achieved
14 by the Company. This process will ensure that customers only pay for capacity
15 and energy savings actually realized by customers and the Company.

16 Additionally, the Company is requesting that the Commission approve
17 implementation of the energy efficiency programs contained in the Company’s
18 Application, as further described in my testimony and exhibits, including the
19 projected load impacts and program measure incentive levels.

20 **IV. DEVELOPMENT OF NEW ENERGY EFFICIENCY PORTFOLIO**

21 **Q. PLEASE DESCRIBE THE PROCESS BY WHICH THE COMPANY**
22 **DEVELOPED THE NEW ENERGY EFFICIENCY PROGRAMS**
23 **CONTAINED IN ITS APPLICATION.**

1 A. The Company developed its portfolio of programs in collaboration with interested
2 stakeholders participating in the Company's South Carolina Energy Efficiency
3 Collaborative Group ("Collaborative"). The Collaborative includes a diverse
4 group of customers, state agencies, environmental groups, and other stakeholders.
5 Participants in the Collaborative include The South Carolina Office of Regulatory
6 Staff, The Timken Corporation, Sierra Club, Environmental Edge Consulting, The
7 University of South Carolina Upstate, Greenville County Schools, and the South
8 Carolina State Energy Office. Advanced Energy Corporation moderates each
9 meeting of the Collaborative. Advanced Energy Corporation is a non-profit
10 national resource based in North Carolina that works with utilities to develop
11 programs and services to benefit their customers.

12 The Company employed a three-step process to determine the programs to
13 be included in the proposed portfolio. First, it compiled a list of energy efficiency
14 programs already offered and tested by Duke Energy Carolinas' and its affiliate
15 utility operating companies. Implementing programs already offered by the
16 Company's affiliates is likely to result in lower costs and operational efficiency
17 through shared administration and best practices. Second, the Company solicited
18 new program ideas from all members of the Collaborative and solicited direct
19 input from South Carolina customers through primary research. Third, the
20 Company refined these ideas, applying multiple cost-effectiveness analyses to
21 evaluate all current or proposed programs. Programs deemed cost-effective were
22 incorporated into a master list of program ideas, reviewed and agreed to by the

1 Collaborative members, and finally, consolidated into the list of energy efficiency
2 programs included in the portfolio.

3 **V. ENERGY EFFICIENCY PROGRAM DESCRIPTIONS**

4 **Q. PLEASE GENERALLY DESCRIBE THE PORTFOLIO OF ENERGY**
5 **EFFICENCY PROGRAMS THAT DUKE ENERGY CAROLINAS HAS**
6 **REQUESTED THAT THE COMMISSION APPROVE.**

7 A. The programs are designed to greatly expand the reach of energy efficiency in the
8 Company's South Carolina service territory by providing more options for
9 customers to control their energy usage and manage their bills. The programs
10 also provide customers with the opportunity to lower their environmental
11 footprint through direct participation in energy efficiency. Duke Energy
12 Carolinas' proposal includes the following mix of conservation and demand-
13 response programs:

14 **RESIDENTIAL CUSTOMER PROGRAMS**

- 15 • Residential Energy Assessments
- 16 • Smart Saver[®] for Residential Customers
- 17 • Low Income Services
- 18 • Energy Efficiency Education Program for Schools
- 19 • Power Manager

20 **NON-RESIDENTIAL CUSTOMER PROGRAMS**

- 21 • Non-Residential Energy Assessments
- 22 • Smart Saver[®] for Non-Residential Customers
- 23 • PowerShare[®]

1 In addition, research programs are included to begin pilots with customers to
2 determine the potential impacts of these new programs.

3 **RESEARCH PILOT PROGRAMS**

- 4 • Efficiency Savings Plan
- 5 • Advanced Power Manager Program

6 A more detailed description of each program is provided in the attached Schultz
7 Exhibit 1, but following is a general description:

8 **Residential Energy Assessments** are designed to help residential customers
9 identify opportunities to use energy more efficiently through mail-in analysis, on-
10 line analysis, and on-site energy audit. Participating customers will receive either
11 an energy efficiency kit or compact fluorescent light bulbs at the time of the audit
12 to begin their energy savings immediately.

13 **Non-Residential Energy Assessments** are designed to help commercial and
14 industrial customers identify opportunities to use energy more efficiently through
15 on-line analysis, telephone interviews, and on-site energy audits.

16 **Smart Saver**[®] will provide residential customers with incentives to install more
17 energy-efficient, ENERGY STAR[®] certified equipment, such as compact
18 fluorescent light bulbs and high-efficiency air conditioners and heat pumps. The
19 commercial and industrial customer program will provide incentives to install
20 high-efficiency lighting, heating, ventilation, and air conditioning equipment,
21 motors, and pumps.

22 **Low Income Services** will assist low income residential customers with energy
23 efficiency measures using kits or through assistance in purchasing equipment and

1 weatherizing homes.

2 **Power Manager** will enable residential customers to receive a monthly credit
3 from July to October in exchange for allowing Duke Energy to cycle their central
4 air conditioning systems in times of peak power demand and to interrupt the
5 central air conditioning when the Company has capacity constraints.

6 **PowerShare**[®] will enable nonresidential customers to receive a credit on their
7 bills in exchange for reducing their electric use in times of peak power demand or
8 unexpected capacity constraints.

9 **Efficiency Savings Plan** is a pilot program to evaluate allowing residential,
10 commercial, and industrial customers to install energy efficiency products with no
11 up-front payment, allowing customers to save money by reducing their energy
12 use. Customer would pay for these products through an added charge to their
13 power bill.

14 **Advanced Power Manager** is a pilot program to develop a new standard offer
15 that makes energy efficiency a part of customers everyday lives without
16 sacrificing their comfort, convenience or productivity. This program will evaluate
17 new technologies to study the feasibility of an energy management system that
18 enables the new standard offer. Additionally, this program will test load
19 aggregation concepts for non-residential customers to achieve greater impacts and
20 customer benefits.

21 However, these programs are just the beginning. The save-a-watt
22 approach provides Duke Energy Carolinas the incentive to pursue all cost-
23 effective energy efficiency initiatives. It is the Company's goal to supplement

1 these programs in future years with new product offerings that further expand the
2 potential cost-effective energy efficiency impacts that can be achieved.

3 **Q. WHY DOES DUKE ENERGY CAROLINAS' ENERGY EFFICIENCY**
4 **PLAN PROPOSE CANCELLING EXISTING DEMAND-RESPONSE**
5 **PROGRAMS AND REPLACING THEM WITH NEW DEMAND-**
6 **RESPONSE PROGRAMS?**

7 A. As previously stated, Duke Energy Carolinas' current programs are more than 20
8 years old and have been virtually unchanged in more than 10 years. Based on
9 customer research and the experience developed from operating these programs,
10 the Company believes customer adoption, satisfaction, and acceptance of
11 demand-response programs can be improved. For example, residential customers
12 traditionally have been unhappy when the Company uses its air conditioning load
13 control system because it temporarily can suspend the customer's usage of the
14 unit during very warm weather. To remedy this issue, the Company proposes to
15 introduce and expand load reduction mechanisms that limit the temperature
16 impact a customer might experience. Additionally, the Company is proposing to
17 standardize its residential load control program across all five states, reducing
18 administrative costs and allowing the Company to utilize best practices to
19 uniformly refine the program.

20 Non-residential customers also have expressed a desire for a viable
21 voluntary curtailment option, an increase in credits paid for firm curtailment, and
22 some standardization between curtailment programs for standby emergency
23 generators and firm interruptible load. The Company has addressed each of these

1 issues in the new portfolio of proposed programs. In order for a smooth
2 transition, the monthly capacity credits for mandatory curtailments are the same
3 as the old interruptible service program for the first two years, but energy credits
4 are now offered when a customer sheds load as part of a mandatory curtailment,
5 raising the effective overall credits paid to an interruptible load customer who
6 migrates to the new program. Also, a new day-ahead voluntary curtailment
7 program is also proposed, allowing customers to bid quantities of load they are
8 willing to shed in return for curtailment credits. This program would be open, as
9 an additional option, to customers on the mandatory curtailment program or new
10 customers who traditionally have not participated in any form of load reduction
11 program. Lastly, the Company is addressing concerns of standby generation
12 customers by standardizing the credits paid to customers for mandatory
13 curtailment regardless of whether the customers have shifted load to standby
14 emergency generators.

15 These new residential and non-residential demand-response programs
16 should increase customer satisfaction and adoption over the old programs.
17 Therefore, in connection with the implementation of the proposed portfolio of
18 energy efficiency programs, the Company requests approval to close certain
19 existing demand response riders to new customers and to transition customers to
20 similar programs included in the proposed portfolio with appropriate notice, after
21 which the programs will be cancelled. The affected riders are: Interruptible
22 Service Rider (Rider IS), Standby Generation Control Rider (Rider SG), and
23 Residential Load Control Rider (Rider LC).

1 **Q. WHICH EXISTING EFFICIENCY PROGRAMS DOES DUKE ENERGY**
2 **CAROLINAS' PROPOSE TO CANCEL AND REPLACE AS PART OF ITS**
3 **NEW ENERGY EFFICIENCY PLAN?**

4 A. In connection with the implementation of the proposed portfolio of energy
5 efficiency programs, the Company requests approval to cancel Riders IS, SG, and
6 LC, as well as the Existing Residential Housing Program (Leaf 142). Riders IS
7 and SG will be replaced in the new portfolio with PowerShare[®]. Rider LC will be
8 replaced in the new portfolio with Power Manager. The Existing Residential
9 Housing Program (Leaf 142) is being replaced by the Smart Saver[®] Program,
10 which offers customers incentives and can be administered centrally across all
11 five states in which Duke Energy operates. No changes are proposed at this time
12 for the Residential Energy Star rate. Customers will be notified about the change
13 in product offerings and may sign up for any new offerings as they are available.

14 **Q. WHY IS FLEXIBILITY IN PROGRAM OFFERINGS AN IMPORTANT**
15 **PART OF DUKE ENERGY CAROLINA'S ENERGY EFFICIENCY**
16 **PLAN?**

17 A. Duke Energy Carolinas needs to be able to make program changes and reallocate
18 resources among programs over the lives of the programs to optimize results for
19 both customers and the Company. This flexibility is crucial to the success of the
20 undertaking, particularly given the innovative nature of the effort and the need to
21 make timely and responsive changes as the Company gains experience working
22 with customers in the energy efficiency markets.

23 Duke Energy Carolinas proposes to review and adjust programs and

1 overall portfolio funding levels on an annual basis. Any changes will be based on
2 the performance of the programs, market conditions, economics, and consumer
3 demand. The Company will report annually to the Commission on significant
4 program changes, resource reallocations among programs, proposed new
5 programs, and program evaluation results.

6 **VI. PROJECTED RESULTS**

7 **Q. PLEASE PROVIDE A PROJECTION OF THE RESULTS THAT THE**
8 **COMPANY EXPECTS TO SEE FROM IMPLEMENTATION OF THIS**
9 **PROGRAM.**

10 A. The Company will update the Energy Efficiency Plan annually based on the
11 performance of programs, market conditions, economics, consumer demand, and
12 avoided costs. A projection of the results we expect and the associated revenue
13 requirements of the Company's initial 4-year plan for South Carolina and North
14 Carolina are summarized in the following table:

4-year Energy Efficiency Plan Projected Results (NC and SC)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4
Cumulative System MW	961	1214	1423	1865
Cumulative System MWh	180,000	380,000	552,000	743,000
SC Retail Revenue Requirements (\$MM)	\$24	\$30	\$36	\$48

15 **Q. CAN YOU GIVE AN EXAMPLE OF HOW THE COMPANY'S ENERGY**
16 **EFFICIENCY PLAN MIGHT BENEFIT AN INDUSTRIAL CUSTOMER?**

17 A. Yes. The Company has done an analysis of a manufacturer with (i) a 500,000
18 square foot plant, (ii) annual electric consumption of 34,560,000 kWh, (iii) a load
19 factor of 80%, and (iv) an annual bill of \$1,728,000. Based on this analysis, if

1 that industrial customer implements the energy efficiency measures recommended
2 by the Company and participates in the Company's proposed Demand Response
3 Program at a 60% Load Curtailment level, Duke Energy Carolinas projects that
4 this manufacturer could see annual savings of \$198,873 or 11% of its current
5 annual bill. This savings estimate is net of the Rider EE (SC), which that
6 customer will be paying.

7 **Q. WOULD DUKE ENERGY CAROLINAS' ENERGY EFFICIENCY PLAN**
8 **ALSO BENEFIT RESIDENTIAL CUSTOMERS?**

9 A. Yes. While not as dramatic (in real dollar terms) or easy to estimate as the
10 savings that will be available to industrial customers, the Company believes that
11 residential customers who participate in its energy efficiency programs can
12 experience real savings over their current bills, which are in addition to the
13 savings that all customers will see as the Company saves watts and avoids adding
14 new generation through more traditional methods.

15 **VII. CONCLUSION**

16 **Q. WHY ARE DUKE ENERGY CAROLINAS' PROPOSED ENERGY**
17 **EFFICIENCY PROGRAMS IN THE PUBLIC INTEREST?**

18 A. Duke Energy Carolinas has heard from its customers and other stakeholders that
19 there is a growing interest for South Carolina customers to have "green" options
20 to lower their environmental footprint. The save-a-watt approach allows us to
21 meet part of the increasing energy needs of South Carolina without building new
22 generation facilities. There is no "greener" approach to meeting those needs. In
23 addition, this approach also allows us to do the following:

- 1 • Lower bills for customers on average, compared to the bills that would result
2 from additional generation resources;
- 3 • Offer the potential to substantially lower bills for customers who participate in
4 energy efficiency programs; and
- 5 • Provide more options to help customers manage their bills in a rising energy
6 price environment.

7 **Q. WAS SCHULTZ EXHIBIT NO. 1 PREPARED BY YOU OR UNDER**
8 **YOUR SUPERVISION?**

9 A. Yes.

10 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

11 A. Yes.

PROGRAM DESCRIPTIONS

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Residential Energy Assessments

Program: This program will assist residential customers in assessing their energy usage and will provide recommendations for more efficient use of energy in their homes. The program also will help identify those customers who could benefit most by investing in new energy efficiency measures, undertaking more energy efficient practices, and participating in Duke Energy Carolinas programs. The types of available energy assessments and energy efficiency products are as follows:

- Mail-in Analysis. The customer provides information about his/her home, number of occupants, equipment, and energy usage on a mailed energy profile survey, from which Duke Energy Carolinas will perform an energy use analysis and provide a Personalized Home Energy Report including specific energy saving recommendations.
- Online Analysis. The customer provides information about his/her home, number of occupants, energy usage and equipment through an online energy profile survey. Duke Energy Carolinas will provide an Online Home Energy Audit including specific energy saving recommendations.
- On-site Audit and Analysis. Duke Energy Carolinas will perform one on-site assessment of an owner-occupied home and its energy efficiency-related features during the life of this program.
- Low-Income Multi-Family Assessment Pilot. Duke Energy Carolinas will select property managers to coordinate communication and scheduling of property audits with tenants. Assessments will focus primarily on building envelope and HVAC.

Eligibility: Available to individually metered residential customers receiving concurrent service from the Company. On-site assessments are only available to owner-occupied single family residences.

For the pilot program, assessments are only available to customers in low-income multi-family complexes.

Customer Incentive: The assessment is free to the consumer. Participants receive either an energy efficiency kit or six-pack of compact fluorescent light bulbs (“CFLs”) at the time of the audit to begin their energy savings immediately. For the multi-family pilot, customers will receive an energy efficiency kit and property managers will receive a report with findings and recommendations in the pilot program.

Marketing: Residential assessments may be marketed by several means, including but not limited to, direct-mail offers to customers, bill inserts, e-mail, and promotion on Duke Energy's Web site. The pilot program will be marketed to complexes selected by Duke Energy after consultation with State entities, such as the South Carolina Office of Economic Opportunity and Carolina Community Actions, Inc.

1 **Delivery Organization(s):** Vendors that will be chosen through a competitive bid
2 process.

1 **Smart Saver[®] for Residential Customers**

2
3 **Program:** The Smart Saver[®] Program will provide incentives to residential customers
4 who purchase energy efficient, ENERGY STAR[®] certified equipment. The program will
5 start with two components – compact fluorescent light bulbs and high-efficiency HVAC
6 equipment

7
8 **Residential Compact Fluorescent Light Bulbs (“CFLs”) Incentive Program**

9 This program will provide market incentives to customers and market support to
10 retailers to promote use of CFLs. Special incentives to buyers and in-store support
11 will increase demand for the products, spur store participation, and increase
12 availability of CFLs to customers. Part of this program is to educate customers on the
13 advantages (functionality and savings) of CFLs so that they will continue to purchase
14 these bulbs in the future when no direct incentive is available.

15
16 **Eligibility:** All Duke Energy Carolinas residential customers in the Company’s
17 South Carolina service area are eligible to participate in the program.

18
19 **Customer Incentive:** Customers may be offered coupons or a discounted price for
20 the purchase of CFLs.

21
22 **Marketing:** Marketing support will include point-of-purchase displays and
23 materials, cooperative advertising, coupons, special “instant sales events” as
24 appropriate, promotion through Duke Energy Carolinas bills, promotion on the
25 Company’s Web site, direct mail, and media advertising to make customers aware of
26 the program. These promotional materials will provide a means for the customer to
27 make the discounted purchase and will provide Duke Energy Carolinas the
28 information about who purchased the bulbs.

29 **Delivery Organization(s):** CFLs will be marketed and sold through major retailers
30 and via the Web at online stores. Customers will receive incentive coupons via mass
31 mailings or via our corporate Web site.

32
33 **Residential Smart Saver[®] Air Conditioners and Heat Pumps Incentive Program**

34 This program will provide incentives to customers, builders, and heating contractors
35 (HVAC dealers) to promote the use of high-efficiency air conditioners and heat
36 pumps with electronically commutated fan motors (“ECM”). The program is
37 designed to increase the efficiency of HVAC systems in new homes and for
38 replacements in existing homes.

39
40 **Eligibility:** New or existing owner-occupied residences, condominiums, and mobile
41 homes served by Duke Energy Carolinas.

42
43 **Customer Incentive:** Incentives (rebates) will be paid to the builder (new homes) or
44 for existing homes, part to the homeowner and part to the HVAC contractor. The
45 rebate per HVAC unit is \$300.00.

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Marketing: This program will be promoted by targeted direct marketing offers to HVAC contractors and homeowners with aging equipment.

Delivery Organization(s): Energy efficient heat pumps and air conditioners will be sold and installed by qualified dealers.

1 **Low Income Services**
2

3 **Program:** The purpose of this program is to assist low income residential customers with
4 energy efficiency measures to reduce energy usage through energy efficiency kits or
5 through assistance in the cost of equipment or weatherization measures.
6

7 **Eligibility:** Weatherization and equipment assistance are available for up to 5000
8 existing, individually metered, single-family, owner-occupied all-electric residences,
9 condominiums, or mobile homes served by Duke Energy Carolinas. Household income
10 is at least 150%, but not more than 200% of the federal poverty level. Low income
11 customers who fail to qualify based on income level are still eligible to receive an energy
12 efficiency kit through participating assistance agencies.
13

14 **Customer Incentive:** For weatherization and equipment assistance, a home energy
15 audit will be performed. Funds are available for weatherization measures and/or
16 refrigerator replacement with an ENERGY STAR[®] appliance and/or heating system
17 replacement with a 14 or greater SEER heat pump. Energy efficiency kits will be
18 available through assistance agencies to other low income customers.

19 **Marketing:** Direct mail will be used to target customers for weatherization and
20 equipment assistance. Customers will be directed to contact their local weatherization
21 organization. For the energy efficiency kits, there will be no marketing. The kits will be
22 provided by assistance agencies to their clients.

23 **Delivery Organization(s):** Installation of weatherization measures or equipment
24 replacements may be installed through vendors that will be chosen through a competitive
25 bid process and/or coordinated through local agencies that administer state weatherization
26 programs and payments will be made to the agency on behalf of the customers.
27

1 **Energy Efficiency Education Program for Schools**

2

3 **Program:** The purpose of this program is to identify the current science/math
4 curriculum standards where Duke Energy Carolinas' program might fit and the
5 appropriate grades for successful implementation of an energy efficiency program. The
6 program will look to educate students on energy efficiency and drive students to answer
7 energy efficiency audit questions about their home and energy usage, to promote on-site
8 school audits, and to compel students to install energy efficiency measures (*e.g.*, energy
9 efficiency kits and compact fluorescent light bulbs ("CFLs")).

10

11 **Eligibility:** This program is available to all K-12 students in public and private schools
12 who are served by Duke Energy Carolinas.

13

14 **Customer Incentive:** Beyond the energy efficiency education, this program provides
15 students the ability to perform an energy audit of their homes and the ability to assist in
16 an energy assessment of their school. Each student who completes a home energy audit
17 will receive a home energy efficiency measure (*e.g.*, package of 6 CFLs, an energy
18 efficiency kit for the home).

19 **Marketing:** This program will be promoted through teacher education and general
20 promotion in the education community.

21 **Delivery Organization(s):** The Company's current plan is to deliver this program
22 through a vendor that will be chosen through a competitive bid process.

1 **Power Manager**

2

3 **Program:** Power Manager is a residential load control program. Participants receive
4 billing credits during the billing months of July through October in exchange for allowing
5 Duke Energy Carolinas the right to cycle their central air conditioning systems and to
6 interrupt the central air conditioning when the Company has capacity problems.

7

8 **Eligibility:** Available to individually metered residential customers receiving concurrent
9 service from the Company on Schedule RS, RE, or ES, who are not served under Rider
10 SCG. Customers currently on Rider LC for air conditioning control will be migrated to
11 Power Manager or allowed to opt out of Power Manager with appropriate notice. Rider
12 LC will be cancelled.

13

14 **Customer Incentive:** For participation in the program, customers will receive bill
15 credits of \$8.00 per month for the summer billing months of July – October.

16 **Marketing:** Power Manager program information will be provided in bill inserts and on
17 Duke Energy Carolinas' Web site, but the program will not be marketed actively until
18 two-way communication is available.

19 **Delivery Organization(s):** Customers can sign up for the program by calling the
20 Company's customer service representatives. Load control switches will then be
21 installed by a third-party hired by Duke Energy Carolinas. Customers will be charged an
22 installation fee.

1 **Non-Residential Energy Assessments**

2
3 **Program:** The purpose of this program is to assist non-residential customers in assessing
4 their energy usage and providing recommendations for more efficient use of energy. The
5 program will also help identify those customers who could benefit from other Duke
6 Energy Carolinas Energy Efficiency non-residential programs.

7
8 The types of available energy assessments are as follows:

- 9
10 ○ Online Analysis. The customer provides information about their facility. Duke
11 Energy Carolinas will provide a report including energy saving recommendations.
12
13 ○ Telephone Interview Analysis. The customer provides information to Duke Energy
14 Carolinas through a telephone interview after which billing data, and if available, load
15 profile data, will be analyzed. Duke Energy Carolinas will provide a detailed energy
16 analysis report with an efficiency assessment along with recommendations for energy
17 efficiency improvements. A 12-month usage history may be required to perform this
18 analysis.
19
20 ○ On-site Audit and Analysis. For customers who have completed either an Online
21 Analysis or a Telephone Interview Analysis, Duke Energy Carolinas will cover 50%
22 of the costs of an on-site assessment. Duke Energy Carolinas will provide a detailed
23 energy analysis report with an efficiency assessment along with recommendations,
24 tailored to the customer's facility and operation, for energy efficiency improvements.
25 The Company reserves the right to limit the number of off-site assessments for
26 customers who have multiple facilities on the Duke Energy Carolinas system. Duke
27 Energy Carolinas may provide additional engineering and analysis, if requested and
28 the customer agrees to pay the full cost of the additional assessment.
29

30 **Eligibility:** Available to Duke Energy Carolinas served demand metered non-residential
31 customers.

32
33 **Customer Incentive:** The customer's incentive is the subsidized cost of assessment
34 work. Customers also will be presented with opportunities to participate in other
35 Company energy efficiency programs as a result of the assessments.

36 **Marketing:** This program will be promoted primarily through three main channels –
37 Duke Energy Carolinas' business relations managers, direct mail (letter), and online
38 newsletter.

39 **Delivery Organization(s):** Assessments will be provided by Duke Energy Carolinas or a
40 qualified third-party.

1 **Smart Saver[®] for Non-Residential Customers**

2

3 **Program:** The purpose of this program is to encourage the installation of high-
4 efficiency, ENERGY STAR[®] certified, where applicable, equipment in new and existing
5 non-residential establishments. The program will provide incentive payments to offset a
6 portion of the higher cost of energy efficient equipment. The following types of
7 equipment are eligible for incentives: high-efficiency lighting, high-efficiency HVAC
8 equipment, high-efficiency motors, and high-efficiency pumps. Customer incentives may
9 be paid for other high-efficiency equipment as determined by the Company to be
10 evaluated on a case-by-case basis.

11

12 **Eligibility:** New or existing non-residential facilities served by Duke Energy Carolinas
13 with prior approval from the Company.

14

15 **Customer Incentive:** Incentives are available for a percentage of the cost difference
16 between standard equipment and higher efficiency equipment, up to 50%. The Company
17 may vary the percentage incentive by type of equipment and differences in efficiency in
18 order to provide the minimum incentive needed to drive customers to purchase higher
19 efficiency equipment and to encourage additional improvements. Over the life of the
20 program, incentives may be reduced as customers naturally move to purchase higher
21 efficiency equipment. There will be a limit on the total amount of incentives available to
22 an individual customer.

23

24 **Marketing:** This program will be marketed to specific segments of non-residential
25 customers and market providers through direct marketing (e.g., mail, e-mail, bill inserts,
26 Web site) and direct contact with market providers.

27

28 **Delivery Organization(s):** The incentive process will be handled by a third-party
29 vendor.

1 **PowerShare[®]**

2 **Program:** PowerShare[®] is a non-residential curtailable program consisting of two options, a
3 Mandatory Option and a Voluntary Option.

4 Mandatory Option customers will receive capacity credits monthly based on the amount of
5 load they agree to curtail during utility-initiated events triggered by capacity problems.
6 Customers enrolled in the Mandatory Option may also be enroll in the Voluntary Option and
7 will be eligible to earn additional credits.

8 Voluntary Option customers will be notified of pending capacity problem or economic
9 events and log on to a Web site to view a posted energy price for that particular event.
10 Customers will then have the option to nominate load for the event and will be paid the
11 posted energy credit for load curtailed.

12

13 **Eligibility:** Available, at the Company's option, to non-residential customers on
14 Schedule G, GA, I, OPT. Only the Mandatory Option will be available, at the
15 Company's option, to non-residential customers on HP. There will be a minimum and
16 maximum amount of load for which the customer may contract to curtail. Customers
17 currently on Rider IS and SG will be given a one-year period to decide if they wish to be
18 migrated to PowerShare[®] or leave Rider IS or SG after which IS and SG will be
19 cancelled.

20

21 **Customer Incentive:** Mandatory Option Customers will receive capacity credits \$3.50
22 per kW for loads they agree to curtail during a utility-initiated event. For actual energy
23 curtailed during an event, Mandatory Option Customers will receive a bill credit of \$0.10
24 per kWh and Voluntary Option customers will receive a percentage of the Hourly Price
25 quoted under the Company's "Hourly Pricing for Incremental Load" Schedule.

26 **Marketing:** PowerShare[®] may be marketed using various means including, but not
27 limited to, direct mail offers to customers, bill inserts, e-mail, and promotion on the
28 Company's Web site.

29 **Delivery Organization(s):** Duke Energy Carolinas will migrate customers from the
30 previous Rider IS and Rider SG onto this program and may add other customers who
31 wish to participate.

1 **Efficiency Savings Plan (Pilot)**
2

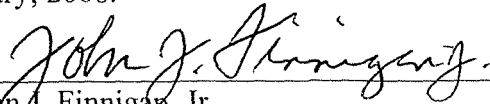
3 **Program:** This is a pilot research and development program designed to learn about and
4 develop a financing structure that helps customers overcome up-front capital outlays for
5 energy efficiency equipment financing. This program will allow residential and non-
6 residential customers to install energy efficiency products with no up-front payment. The
7 customer would pay for these products through a tariff charge on their Duke Energy
8 Carolinas bill. The tariff would be a utility charge that would remain with the facility,
9 not the customer.
10

1 **Advanced Power Manager Program (Pilot)**
2

3 **Program:** This is a pilot research and development program to evaluate new
4 technologies, advanced metering, and new rate structures to study the feasibility of an
5 energy management system that enables the new standard offer. This program would
6 include three phases: (1) a technology trial to determine the operating characteristics of
7 the equipment and prove its viability; (2) a customer trial to determine the appropriate
8 offer structure that benefits customers and accomplishes program goals; and (3) a product
9 roll-out, provided the technology and customer trials are successful. Additionally, this
10 program will test demand response load aggregation concepts for non-residential
11 customers. New offers and rate structures developed for this pilot will be filed with the
12 Commission for approval.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the forgoing Duke Energy Kentucky, Inc. responses to Overland Consulting's Second Set of Discovery Requests are being sent via ordinary U.S. mail, postage prepaid this 14th day of January, 2008.


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